

U.S. Vatican Envoy Won't Participate In Waldheim Events

ROME — The United States said Monday that the head of its diplomatic mission to the Vatican would not attend any ceremonies connected with the visit there Thursday of President Kurt Waldheim of Austria.

Kiosk 3 Are Sentenced In San Juan Fire

SAN JUAN, Puerto Rico (AP) — Three former hotel employees who pleaded guilty to arson in the New Year's Eve fire that killed 97 at the Dupont Plaza Hotel were sentenced Monday to prison terms ranging from 75 to 99 years, substantially longer than prosecutors had asked.



Scott Simpson after sinking a birdie putt as he put together a victory in the U.S. Open golf tournament. Page 21.

GENERAL NEWS ■ U.S. Democratic candidates are reaching a consensus on the party's 1988 agenda. Page 3.

Technology Quarterly The limits of human endurance in space, innovations on the assembly line, the latest in home electronics — in the first Technology Quarterly, Pages 9-14.

Dow close: UP 24.66 The dollar in New York: DM 2 Yen FF 1.847 1.5875 146.20 6.1565



U.S. Asserts That Dispute on Pershings in West Germany Delays Arms Pact

Max M. Kampelman, left, the chief U.S. arms control negotiator, said Monday that the dispute over the 72 Pershing-1A missiles in West Germany whose warheads are under U.S. control was delaying an agreement on controlling medium and shorter-range missiles.

Islam at Center of Ferment in Tunisia

TUNIS — Faced with a surge of fundamentalist dissent, Tunisian officials have been charging that "Khomeini-ist" insurgents, backed by Iran, are plotting a violent overthrow of the government here in pursuit of Tehran's threats to export Islamic revolution.

Lebanese Said to Reject Being Freed

BEIRUT — Ali Ossairan, a Lebanese businessman, has rejected his captors' offer of freedom unless his kidnapped companion, an American journalist, is also freed, sources in the Muslim Shiite community said Monday.

Rehnquist Court: Justice Brennan's 'Finest Hour'

WASHINGTON — The first year of the Rehnquist Supreme Court is turning out to be, in the words of one chastened conservative, "Bill Brennan's finest hour."

Fred Astaire, a Paragon Among Dancers, Is Dead

LOS ANGELES — Fred Astaire, 88, whose debonair elegance and flowing, graceful style made him the most acclaimed dancer in movie history, died Monday of pneumonia in Los Angeles.



Fred Astaire performing a dance routine on skates in 1937.

Airports Fear Solicitation Abuses

LOS ANGELES — Wearing a black suit and clerical collar, James Wright stands daily near an escalator at Los Angeles International Airport, and on a good day he collects \$150 or more in the cigar box he extends to passengers.

Chun Acts To Defuse Protests

Korean Leader Willing to Meet With Opposition

SEOUL — President Chun Doo Hwan was reported Monday to have made important concessions to the opposition — including an agreement to meet with the leader of the main opposition party — but critical details remained vague, leaving the political crisis in South Korea still unsettled.

A Stillness Lingers in Chernobyl

CHERNOBYL, U.S.S.R. — Less than a mile from the Chernobyl nuclear power plant stands a dead forest. Where there were once more than 70 acres of pine trees, now there are only spindly trunks, stumps of needles, tinged a strange rust color.

Handwritten signature or mark at the bottom of the page.

As U.S. Companies Leave South Africa, Divestment Efforts Are Shifted Worldwide

By Mark Porcs
Washington Post Service

WASHINGTON — Opponents of the apartheid policies of South Africa, who have been making headway in their efforts to get companies from the United States to withdraw from that country, now are turning their sights to a much tougher target: companies from other nations with holdings there.

"My anticipation is that there will be a new focus on all companies in South Africa as the American withdrawal becomes more pronounced," said the Reverend Leon Sullivan, the Philadelphia minister who has been a leader in the efforts to reduce American corporate involvement in South Africa.

Tim Smith, director of the Interfaith Center on Corporate Responsibility, said the movement was already "well under way" internationally. His group, based in New York, is involved in efforts to induce American companies to divest their South African operations.

The broadening of the efforts to put economic pressure on South

Africa to end its apartheid policies comes as Mr. Sullivan has taken his hardest line yet on the issue.

He is the author of a set of guidelines, known as the Sullivan Principles, that called for American companies operating in South Africa to maximize opportunities for blacks and to oppose apartheid in other ways.

But now he says the doctrine is not working. Two weeks ago he called for the complete withdrawal of American companies from South Africa.

Last week Citicorp, Ford Motor Co. and ITT Corp. announced plans to end their involvement in South Africa.

That makes nearly 150 American companies that have either left South Africa or have announced plans to do so since 1984, including 39 this year, according to the Investor Responsibility Research Center in Washington.

Many of the companies said they decided to leave to do with Mr. Sullivan's change of position.

They said they made their decisions based on the deteriorating



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— Leon Sullivan

The three corporations that pulled out last week said their decisions had nothing to do with Mr. Sullivan's change of position.

They said they made their decisions based on the deteriorating state of the South African economy, which has all but destroyed the profitability of many American enterprises there.

Still, nearly 200 major American companies remain in South Africa,

led by Mobil Corp., which has more than 3,000 employees there.

Most of these companies say they believe they can force South Africa to change its apartheid policies by working within the system.

But the remaining American-owned operations in South Africa are dwarfed in size by the investments of companies from other nations.

According to a new report by the Investor Responsibility Research Center, 254 foreign companies have direct investments or employes in South Africa, some of them far more involved than Mobil.

They include Standard Chartered PLC, a British banking group with more than 22,000 South African employees; Courtauld PLC, a British paper and textile company with 14,260 workers there; and Royal Dutch Petroleum Co., with 8,160 employees in South Africa, which some experts believe to be the largest foreign investment there.

Other well-known companies with major holdings include West Germany's Volkswagen, Daimler-

Benz and BMW automobile companies; British Petroleum; Switzerland's Nestle S.A.; and Unilever Group, the Dutch-British consumer goods conglomerate.

Japanese companies also are key players in the South African market. They operate primarily through joint ventures or distributorships.

Anti-apartheid activists are focusing on the Japanese companies in part by appealing to their sense of honor.

"I think the Japanese companies are actually quite sensitive to their position," said Mr. Smith of the Interfaith Center on Corporate Responsibility.

Anti-apartheid activists in the United States have pressured American companies doing business in South Africa by proposing stockholder resolutions; urging institutional investors to sell their stock in companies with South African ties; and lobbying for the enactment of laws banning state and municipal government investments in or contracts with companies with South African holdings.

Pressuring companies from other nations, however, is much more difficult.

Only 36 companies from other nations have pulled out of South Africa since 1984, according to the Investor Responsibility Research Center report.

Operating under different corporate rules than those of American companies, companies from other nations are less sensitive to outside pressures.

"We've had the shareholder pressure here that I don't think they've had overseas," said Alison Cooper, an analyst for the Investor Responsibility Research Center.

Mr. Sullivan said of the foreign companies: "They don't have the kind of municipal and state action that can be brought to bear that we have."

Royal Dutch Petroleum, for instance, refused requests this year to introduce shareholders' resolutions at its annual meeting requesting that the company pull out of South Africa.

So activists are trying another gambit. They are using a Dutch law requiring that a special shareholders meeting be called to discuss an issue if 10 percent of the shareholders request it.

Mr. Smith said that institutional and church investors holding 5 percent of the company's stock already support such a request.

In addition, anti-apartheid activists and union leaders are attempting to mount a U.S. boycott of products sold by Shell Oil Co., Royal Dutch's American subsidiary.

But Mr. Sullivan believes it may take more than those tactics to persuade other foreign companies to leave South Africa.

He is calling for congressional action to put trade sanctions on the nations in which these companies are based.

Some activists believe that the influence of large American companies that have pulled out of South Africa will exert pressure on companies from other nations, as well as on the American companies that remain there.

Africa's New Threat: A 'Financial Famine'

By James Brooke
New York Times Service

ABUJA, Nigeria — Africa, still recovering from the famine of 1983-85, is now grappling with an equally damaging "financial famine," African economists say.

Ballooning debt payments, slumping commodity prices and dwindling foreign investment have combined to make the impoverished continent an exporter of capital, said Adebayo Adedeji, a Nigerian who is executive secretary of the United Nations Economic Commission for Africa.

The commission organized a conference in Nigeria last week to take stock of Africa's economic health a year after the United Nations brokered an African development pact.

In return for more Western aid, African nations had agreed to try open-market policies.

By last week, 25 of the 45 black-ruled nations of sub-Saharan Africa had met the UN guidelines. These included cutting state bureaucracies, paying farmers fairer prices and setting realistic exchange rates.

But the conference highlighted the fragility of sub-Saharan Africa — a huge, diverse area of 460 million people that has an overall gross national product smaller than Spain's.

Harsh economic winds are blowing across the continent, causing "financial famine," said Alwyn B. Taylor, director general of the African Center for Monetary Studies. The center is financed by the central banks of 45 African countries.

Mr. Taylor and other economists cited these recent setbacks:

- Payments on Africa's foreign debt, now about \$95 billion, jumped to \$14 billion in 1986, from \$3 billion in 1983.
- African export revenues fell 29 percent in 1986, to \$45 billion, from \$64 billion in 1985. It was the sharpest drop since 1950.
- Commercial bank flows dropped to \$1.1 billion in 1986, from about \$3.5 billion in 1981.
- U.S. government aid to sub-Saharan Africa dropped 24 percent for 1987, to \$739 million, from \$972 million in 1986. Canada now gives Africa more than the United States does — \$950 million this year.

Last month, Africa's economic plight was highlighted when the Ivory Coast, widely considered an example of fiscal sobriety, announced it would not keep up with payments on its \$8 billion debt. Earlier in the month, Zambia abandoned an accord with the International Monetary Fund because of mounting opposition to the fund's austerity measures.

In both cases, sagging commodity prices were blamed. Coffee and cocoa are the Ivory Coast's top two export commodities, and prices are at their lowest in four years for coffee and in five years for cocoa. Falling copper prices have cut the average Zambian's income by two-thirds in a decade.

Major General Ibrahim Babangida, the president of Nigeria, Africa's most populous country, spoke for many Africans when he complained of "an increasingly unsympathetic world economic and financial power structure."

Western participants at the Nigerian conference generally agreed that the West had lagged in responding to the crisis.

"Whether we look at aid or debt or trade, the rich countries have not as yet lived up to their part of last year's economic recovery pact," said Monique Landry, Canada's minister for external relations and the highest-ranking Western official to attend the conference.

But other Western officials noted several measures adopted recently to pump fresh money into Africa. For instance, they said, members of the African Development Bank, which makes loans for development purposes, voted in Cairo last week to triple the bank's capital to \$19 billion, from \$6.3 billion.

In Venice, the seven powers at the economic summit meeting this month backed a proposal to triple an International Monetary Fund project largely intended for Africa, to \$9 billion from \$3 billion.

The Western officials also noted that next month, the world's largest multilateral lender, the International Development Association, is to open a UN specialized agency, is to open a loan fund designed to double the money available for Africa to \$6 billion.

Debt relief also may be on the horizon.

About 75 percent of Africa's debt is owed to Western governments. The Venice communiqué urged consideration on rescheduling these debts with lower interest rates and longer grace periods.

The United States, long fiscally conservative on the issue, came out recently in favor of giving 10-year grace periods for repayment of African government debts. Canada announced last year that all new aid to sub-Saharan Africa would be provided through grants, not loans.

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INDIAN OPPOSITION CANDIDATE — V.R. Krishna Rao, left, a former Supreme Court judge, ate candy given to him in New Delhi on Monday by the chief minister of Andhra Pradesh state, N.T. Rama Rao, after 14 opposition parties selected Mr. Rao to oppose Prime Minister Rajiv Gandhi in the national elections in 1989. The opposition coalition easily defeated Mr. Gandhi's Congress (I) party in the Haryana state election last week.

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WORLD BRIEFS

Tamil Rebel Leader Killed in Ambush

COLOMBO, Sri Lanka (AP) — Sri Lankan commandos killed the most powerful Tamil guerrilla leader in the Eastern Province during an ambush Monday that left three other separatists dead, the government said.

Police commandos of the Special Task Force ambushed eight fighters of the Liberation Tigers of Tamil Eelam as they were planning to attack a Sinhalese village, a government spokesman said. The other four were wounded but escaped. None of the police commandos was reported hurt.

One of the separatists killed was the Liberation Tigers' leader in the Eastern Province, who was known as Regan, the spokesman said. According to the government, Regan had set up the slaughter of 30 Buddhist monks and 4 civilians near Arambathawa village on June 2, following the massacre of 10 Sinhalese there May 29.

UN Plan on Gulf War Called a Repeat

UNITED NATIONS, New York (NYT) — After a six-month campaign for a resolution "with teeth," the United States has settled for a draft Security Council plan to end the Iran-Iraq war that basically repeats earlier statements, United Nations officials said Monday.

On Sunday, Michael H. Armacost, U.S. undersecretary of state for political affairs, hailed superpower support for the draft resolution, but UN officials described the new plan as essentially a repetition of Security Council Resolution 582 of February 1986, calling for an immediate ceasefire, withdrawal and an exchange of prisoners.

Iran refused to comply with that resolution, and the new draft lacks the one component that might give it some force — an arms embargo against whichever combatant did not comply.

Turkey Threatens NATO Pullout

ISTANBUL (Reuters) — Turkey threatened Monday to review its membership in the North Atlantic Treaty Organization following a European Parliament resolution charging that Armenians had been genocide victims.

Turkish leaders have said that the vote Thursday by the Strasbourg-based European Parliament had encouraged Kurdish rebels who massacred 30 villagers in southeastern Turkey over the weekend. The Parliament resolution said that Turkey should recognize as genocide the deaths of hundreds of thousands of Armenians in 1915 as a condition of its entry into the European Community.

President Kenan Evren, in a speech in the central town of Sivas, said: "It would be useful to sit down and review once again Turkey's membership of NATO." Mr. Evren, quoted by state radio, accused some NATO countries, which he did not name, of helping Kurdish rebels.

Poland Censors Bishops' Statement

WARSAW (Reuters) — The Communist authorities heavily censored a statement by Poland's Catholic bishops Monday supporting calls by Pope John Paul II for more political freedom and respect for human rights in his homeland.

The bishops met during the weekend to assess the pope's pilgrimage to Poland this month and issued a communiqué repeating the themes he raised in homilies endorsing the ideals of the banned Solidarity union movement.

The references were all cut from a version of the communiqué reported by the PAP press agency and published by government and party newspapers. They included an assertion by John Paul that every Pole should have the right to participate without discrimination in all aspects of society, including politics, and to express "rightful opposition."

Burma Airliner Missing in Mountains

RANGOON, Burma (AP) — A Burmese airliner with about 40 people aboard disappeared and airline officials said Monday it may have crashed in the mountains of eastern Burma.

An airline source said the Burma Airways Fokker Friendship 27 was on a regular commercial flight Sunday evening in Shan state. A government official said it was a special flight carrying local officials and officials of the ruling Burma Socialist Program Party.

"There is a plane missing," an airline source said. "Most probably it crashed in rugged terrain. It is true there could be no survivors." Sources said the control tower lost contact with the twin-engine plane 10 to 15 minutes after it took off from Heho, 280 miles (450 kilometers) northeast of Rangoon. It was on a one-hour trip to Mong Hsat, about 15 miles east of Heho, also in Shan state, they said.

For the Record

President Hosni Mubarak of Egypt plans to run for a second six-year term, according to an announcement in Cairo on Sunday by Youssef Wali, secretary-general of Mr. Mubarak's National Democratic Party. The official Middle East News Agency quoted Mr. Wali as saying that campaigning would begin next month and a national referendum would be conducted in October to elect the president. (AP)

The International Whaling Commission began its annual meeting in Bournemouth, England, on Monday amid demands by ecological groups for a complete worldwide ban on whaling. The congress was to be held in private session until the end of the week, while members of ecological groups were to hold protests outside the meeting place. (AP)

Foreign Minister Shimon Peres of Israel left for Europe on Monday in another effort to gather support for a Middle East peace plan opposed by his government coalition partner, Prime Minister Yitzhak Shamir. (UPI)

France has agreed to resume deliveries of Mirage aircraft to Egypt, suspended in April because of payment delays, Defense Minister Abdel-Fattah Abu Ghazal of Egypt said Monday. (Reuters)

TRAVEL UPDATE

Italy May Face a Disruptive Summer

ROME (Reuters) — Travelers in Italy are facing a summer of chaos because of strikes by workers in several sectors of the transport industry, union officials said Monday.

Rail workers and airline pilots seeking improved pay and conditions have called strikes for several days over the next three months, and workers on ferries between Italy and Sardinia have been striking for four hours a day.

Gasoline station attendants were to decide Monday whether to strike for 48 hours to protest possible government deregulation of prices. The strikers are organized by groups outside Italy's main union federations.

A Europe Airlines to Coordinate Data

PARIS (Reuters) — Four European airlines have agreed to set up a joint computerized system to coordinate information about travel services, Air France said Monday.

The system, agreed on by Air France, Iberia of Spain, Lufthansa of West Germany and the Scandinavian Airline System, will become operational in 1989, it said. Called Amadeus, it will offer travel agencies and airlines an integrated display of airline, hotel and car rental services.

Sheikh Balks Pentagon, State Department Divided At Accord on Sharjah Rule

By Elaine Sciolino
New York Times Service

WASHINGTON — The Pentagon is locked in a struggle with the State and Commerce Departments over whether the United States should continue to trade with Iran, according to administration officials.

Defense Secretary Caspar W. Weinberger is arguing strongly for a total ban on trade except for medical supplies and other things that he describes as humanitarian goods. Officials at the State and Commerce Departments believe that current trade levels, which include goods from caviar to oil, are reasonable, the administration officials said.

In a letter several days ago to Frank C. Carlucci, the president's national security adviser, Mr. Weinberger objected to an inter-agency draft report on the Iran trade debate that was sent to the National Security Council early this month. He also strongly argued for his own position, according to Pentagon and White House officials.

"We look ridiculous when we keep trading with somebody whose economy is geared toward war and there is no control over where your products end up," a Pentagon official said. "Mr. Weinberger believes that the report casts a pall over the idea of an embargo and makes our option look unworkable."

The dispute stems from a decision by the Reagan administration in March to approve export licenses for the sale of \$900,000 worth of computers to Iran over Mr. Weinberger's objections.

Mr. Weinberger was so distressed by the awarding of the license that he sent letters requesting that the issue be taken up at the level of the National Security Council and adjudicated by President Ronald Reagan.

The council agreed, and asked the various government agencies involved to draft a joint report on the overall trade debate sparked by the computer issue. But when the report, which is classified, was submitted this month, it was so vague in outlining options for the administration that White House officials asked that it be rewritten.

Pentagon officials said they hoped to be able to capitalize on this opportunity and win the White House to their side before a final draft is accepted.

The draft report, parts of which were made available, acknowledges the split in the administration. "All concerned agencies share concern that exports not enhance Iran's military or terrorist capability," it said. "However, there is disagreement whether existing controls adequately address this concern."

Trade with Iran is only a small fraction of what it was before Shah Mohammed Reza Pahlavi was overthrown in the 1979 revolution.

Iran, which has sought to minimize trade with the United States, last year bought \$34 million worth of American-made goods — from small machinery and agricultural products to pigments and paper. The sale of computers never went through, however, because in the end the Iranians did not want them.

The United States imported more than \$600 million in goods from Iran last year, most of it oil on the spot market, as well as carpets, caviar, glassware, gems, antiques, camphor and pistachios.

Pentagon, State Department Divided On Question of U.S. Trade With Iran

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Australian Assails U.S. Protectionism

SYDNEY — Foreign Minister Bill Hayden issued an urgent plea to the U.S. government Monday to fight protectionist moves in Congress that he said could undermine Australian security.

Opening a day of military talks with the U.S. secretary of state, George P. Shultz, and the defense secretary, Caspar W. Weinberger, Mr. Hayden said that Australians see economic well-being as a major component of security.

"I cannot stress too strongly," he said, "the damage that would be dealt to the Australian and other nonsubsidizing agricultural exporters by some of the protectionist measures now under consideration in the United States Congress."

Mr. Shultz said Australia's economic and trade interests "continue to hold our attention as we grapple with our own budgetary and trade difficulties."

Mr. Hayden, discussing protectionism, also noted U.S. efforts to end widespread subsidies of commodity exports, which both he and Mr. Shultz said showed promise.

"But countries such as Australia played no part in creating those problems," Mr. Hayden told Mr. Shultz. "Indeed, we are playing our part in reaching a solution, because we have a two-to-one trade deficit with you."

Mr. Weinberger, focusing on military issues, asserted that New Zealand was militarily much weaker outside the alliance with Australia and the United States. This is the third year that New Zealand has been absent from the talks.

In a joint communiqué, Australia and the United States regretted the enactment of New Zealand's anti-nuclear policy earlier this month.

However, there was continued disagreement between Washington and Canberra over French nuclear tests in the Pacific.

Test Site Report Denied by France

PARIS — A report that the United States offered to let France use its Nevada nuclear-test facilities as an alternative to the South Pacific test site has "no foundation," a source close to Defense Minister Andre Giraud said Monday.

Such speculation, the source said, was "aimed at discrediting French independence" at a time when it was trying to work for the creation of a European defense system.

The offer was reported by the International Herald Tribune on Monday in a story from Singapore. It cited Australian officials and a U.S. official as saying that the offer was made in an effort to reduce anti-nuclear sentiment among South Pacific countries, who oppose French nuclear testing at Mururoa atoll. Those officials told the International Herald Tribune that France had rejected the offer but that it remained open.

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APL 10/12/87

U.S. Case of a Retarded Murderer Raises New Death Penalty Quandary

By Ruth Marcus
Washington Post Staff Writer

CONWAY, South Carolina — Minutes after the decision, the guards brought Limmie Arther, a convicted murderer with an IQ of 65, to a small back room in the Horry County jail to talk with his lawyer.

Experts on mental retardation had spent the day testifying that Mr. Arther, 28, the son of a sharecropper, had the mental ability of a child 10 to 12 years old, at best. They had said he could not remember his lawyers' names or recite the alphabet.

Last month Mr. Arther was sentenced to die in South Carolina's electric chair for killing his crippled 65-year-old neighbor with an ax while watching his Social Security retirement benefits. On Friday, the judge who had imposed the death sentence refused a defense plea to reduce Mr. Arther's sentence to life in prison or grant him a new trial.

One of Mr. Arther's lawyers, John Blume, asked him how he felt about the result.

"I ain't too sure," Mr. Arther said, smiling. "I feel good anyway," he said, adding: "Got a new trial. Limmie, he didn't give us a new trial." The lawyer replied, wincing. "This means we're going to have to appeal it. You know what appeal means?"

"Yes, sir," nodded Mr. Arther. The case of Limmie Arther poses the troubling question of whether the death penalty may be imposed on murderers who are mentally retarded — or whether their execution should be barred, as Mr. Arther's lawyers contend, under the U.S. Constitution's Eighth Amendment, which prohibits cruel and unusual punishment.

"It's just wrong to execute people whose understanding of the world is that of children," said Mr. Arther's chief lawyer, David Bruck.

"The death penalty is an absolute punishment," he said. "And if it is to be imposed at all, it should be imposed on people whose sense of responsibility and judgment is such that they fully appreciated the seriousness of what they were doing."

But prosecutors in Mr. Arther's case, and other advocates of capital punishment, argue that, as long as mentally retarded offenders understand the criminality of their acts and are competent to stand trial, their low intelligence should not shield them from execution.

"There is an abundance of evidence in the record to show the defendant knew what he was doing, knew the criminality of his act, knew the difference between right and wrong," argued Debbie Owens,

U.S. Amnesty Group Seeks End to Penalty

United Press International

SAN FRANCISCO — Amnesty International USA has decided to seek an end to the death penalty, which speakers called a violation of human rights and "a surreptitious expression of racism."

The international group, which won the Nobel Peace Prize in 1977, is best known for its efforts to end human rights violations around the world.

But its U.S. director, John Healy, told 1,000 American members at the group's annual meeting that capital punishment is the ultimate violation of human rights and should be abolished.

He called for an end to capital punishment in the United States.

"We should know that when the death penalty enters any country in the world, then the minorities who live there should be scared because it will be used against them — as it has been used in this country against blacks," he said Saturday.

An Amnesty International staff member, Charles Fulwood, said the death penalty, as practiced in the United States, is "a surreptitious expression of racism" because statistics show that a disproportionate number of blacks receive it.

Mr. Healy said the group would first oppose the death penalty in Florida, Texas, Louisiana and Georgia because most executions in the United States take place in those states. He added that Amnesty International would work with the NAACP and the American Civil Liberties Union.

capital punishment was reinstated, at least five were diagnosed as mentally retarded or borderline. But the issue of their mental capacity was raised too late in the process to stop their execution.

Mr. Arther is the 17th of 18 children raised in a tiny, unroofed shack amid the tobacco fields of rural Duford, near Myrtle Beach.

The crime for which he has been sentenced to death occurred on New Year's Eve, 1984. Mr. Arther's sister, Marilyn, drove him into town along with William Miller, who was known as Cripple Jack, and Mr. Miller's wife, Katie. Mr. Miller cashed his Social Security check, paid some bills and bought two half-pints (about a half liter) of liquor, which he and Limmie Arther drank behind a local store.

When questioned, Mr. Arther first told the police that he earned the money selling peaches, then switched his story and told them he stole it from his father. When Limmie Arther disputed that, Limmie changed his story again and said he had taken the money from Mr. Miller earlier that day.

Mr. Arther did not testify at his trial.

To prosecutors, the fact that Mr. Arther hid after the murder and lied to the police demonstrate that he understood what he had done.

"If he didn't understand the criminality of his act after he killed Cripple Jack Miller," said Ms. Owens, the prosecutor, "he wouldn't have had the sense to go hide in the attic or the ability to create a story and to change it."

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An Honor for Nancy Reagan

Mikhail Baryshnikov, the ballet star, dancing with Nancy Reagan in Washington during the Ford Theater's festival ball. She was presented with a medal for her support of the theater.

Oratorically, a Democratic Agenda Takes Shape

By E.J. Dionne Jr.
New York Times Service

WASHINGTON — The Democrats who would be president have found a new political language.

Instead of talking about "spending," they propose "investments in the future." They hate the word "taxes," preferring, when they have to, to speak of "new revenues."

And they have dropped themselves in red, white and blue, seeking to blend the theme of compassion with patriotism, optimism and toughness.

But beneath the words is a substantive consensus that is coming to be called the "post-Reagan agenda."

Although it is not yet complete, the emerging platform includes a renewed commitment to public education, a focus on the needs of children, calls for a more competitive but also more cooperative economy, efforts to create a welfare system that emphasizes work and job programs, and an aggressive attack on what they describe as the culture of selfishness.

The Democrats' move toward consensus on domestic policy has not yet been matched by a similar agreement on foreign policy.

But on domestic issues, there is surprising agreement on themes, an accord that stretches from the Democratic Leadership Council on the party's right and center to Americans for Democratic Action at its liberal wing.

Underlying the Democratic consensus is an emphasis on words

such as "community," "citizenship" and "obligation."

The Democrats say that after seven years in which the national credo emphasized the potential and achievements of the individual, the nation is prepared to turn toward a sense of the "public good."

"There's a sense that something is missing," said Representative Richard A. Gephardt of Missouri, one of the presidential candidates. "There's been this worshiping of doing well individually, but it is not allowing us to do well individually or as a nation."

"What we missed in all this, and what the country is beginning to understand, is that human issues, a sense of community, treating everybody decently, is vital to our success," Mr. Gephardt said.

William Schambra, a conservative scholar at the American Enterprise Institute, argues that the Democrats' rhetorical strategy is not new and that liberals have long tried to stress a sense of "national community" as against the conservatives' preference for "local community."

But new or not, the locations are giving the party the opportunity to look unified.

Emphasizing one form of patriotism, former Governor Bruce Babbitt of Arizona, another presidential candidate, speaks of his efforts in the war on poverty. Other Democrats discuss the obligations of "citizenship."

Such language helps solve what Governor Bill Clinton of Arkansas, who is contemplating entering the Democratic contest, has called "the great dilemma for Democrats: how to speak to the possessed and the dispossessed at the same time."

When he was governor of Arizona, Mr. Babbitt pioneered efforts to provide child care at a reasonable cost. In recent weeks, Senator Joseph R. Biden Jr. of Delaware, who is also running, has devoted

more and more attention to children's programs, and other Democrats are following suit.

The economy is another area in which the Democrats are speaking of innovation and compassion. Although they have criticized Japan for its trade policies, many Democrats say the United States needs to learn from Japan's cooperative style of business management.

The Democrats have also taken their party's historic commitment to the rights of workers and refashioned it with an emphasis on "incentives." They praise companies that give workers bonuses and shares of profits and criticize those that give bonuses only to executives.

At the same time there is broad agreement that economic innovation will cost jobs in certain parts of the manufacturing and service industries. Thus, all the candidates talk of the need for expanded training of displaced workers.

Job training, as well as education, again emerges as a theme when the Democrats talk about changing the welfare system.

The candidates believe that most voters favor job training and education programs for the poor, provided that these programs move people off the welfare rolls.

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The Reverend Jesse Jackson, who has not yet announced his candidacy, draws loud applause for his attacks on "merger maniacs," a reference to financiers and Wall Street brokers. Mr. Babbitt emphasizes the difference between entrepreneurs who move "paper" and workers who build the nation's strength.

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Group to Patrol N.Y. Subways

By Esther Iverem
New York Times Service

NEW YORK — Twenty-five young black men began patrolling the city subway system Sunday in an effort to curtail crime that they believe disproportionately affects the black community.

The organizers of the patrol said that the unarmed volunteers will patrol all subway lines from 6 P.M. to 6 A.M. daily and will intercede when they see crimes against the members of any race.

They said the patrol said it began in response to the acquittal last week of Bernhard H. Goetz, 39, in the shooting of four persons on a subway train. Mr. Goetz said he shot them because he believed they intended to rob him.

Mr. Goetz is white and the four young men shot are black. A U.S.

civil rights investigation after the shooting concluded that Mr. Goetz had acted out of fear and that there had been no racial motivation.

Mr. Goetz, an electrical engineer, was charged with attempted murder, assault and illegal possession of a weapon. He was acquitted in the December 1984 shootings by a jury last week. He was convicted of carrying a loaded, unlicensed revolver in a public place.

Nathaniel Cumberbatch, a member of the patrol, which is called the Disciples of Justice, said, "I don't want me or my son to be picked as targets for violence or harassment because we are black."

Mr. Cumberbatch, 33, a construction worker, spoke as he and the other patrol members left the Universal Church of God in Christ in Brooklyn and headed for a nearby subway station.

West German Dentists Strike

United Press International

COLOGNE — Most of West Germany's 30,000 dentists went on strike Monday against a proposed cut in fees involving some services covered by the socialized medical system. Patients needing immediate care were referred to emergency clinics.

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Submarined by Allies

Western security has been undercut by the avarice of two companies, Toshiba of Japan and Kongsberg Vaapenfabrikk of Norway, and by their governments' lackadaisical supervision of militarily sensitive exports. Under false pretenses, the companies shipped machinery to the Soviet Union that will enable the Russians to fabricate quieter submarine propellers. Soviet submarines will now become much harder to detect, all so that Toshiba and Kongsberg could turn some extra profit.

Both Norway and Japan concede the seriousness of the diversion. Neither seems yet to appreciate the sentiment building in Congress for sterner reprisal than the diplomatic nit-picks being uttered by the administration. The House of Representatives last week voted 415-1 to demand compensation. In the Senate, Jake Garn suggests that "we ought to really hurt Toshiba." Norway and Japan would be smart to volunteer some more substantial remedy than the wrist slaps so far given to their errant companies.

No technology can be kept a Western monopoly forever, but there is every reason to try slowing the rate of seepage of militarily useful technology. Under rules set by their coordinating committee, COCOM, the North Atlantic Treaty Organization countries and Japan thus restrict export of such products. Though COCOM rules are administered seriously by the United States, France and Britain, other countries have lax enforcement and mild penalties.

Kongsberg and Toshiba evidently believed they had little to fear in their conspiracy to sell propeller-milling equipment to the Russians. Toshiba provided the milling ma-

chines, Kongsberg the numerical-control computer and software to drive them. Both companies lied to their export authorities about the sophistication of the machines. The U.S. Defense Department believes the Russians supplied the design of the propellers to Kongsberg, which wrote the software. Norway asserts software was provided only for the computer's operating system.

Soviet submarines have long been so noisy that some could be detected an ocean away. Perhaps because of the hemorrhage of navy secrets passed on by the Walker spy ring, recent designs have become considerably quieter, almost as quiet as U.S. submarines. Propellers are only one source of noise, and it is not clear whether Soviet submarines have already benefited from the Kongsberg-Toshiba machines, sold in 1983 and 1984.

But even if the Russians still lack the sophisticated testing and quality controls to make best use of the equipment, they have gained substantially. The navy estimates it will take \$1 billion or more for advanced electronics to undo the damage.

The administration hopes the incident will prompt more vigorous export controls by its allies. It resists the idea of sanctions lest they cause resentment instead of cooperation. But tighter export control is the least to be expected of Norway and Japan. They argue that payment of compensation is inappropriate between sovereign nations, and that their own security was also harmed. But why should only American taxpayers bear the cost of the Kongsberg-Toshiba treachery? Something more is needed than apologies and hand-wringing.

—THE NEW YORK TIMES.

'Time Out, Dammit!'

General Bernard Rogers, retiring as NATO military commander, unbundled himself of no mean valedictory grumble in an interview with Jim Hoagland of The Post (HT, June 19). Referring to the Reagan administration's "rush" to an arms control agreement with Moscow and the cascade of other proposals pouring out of the Kremlin, he declared: "Somebody ought to stand up out there and say to NATO, 'Time out, dammit!' We have moved too quickly, and it is time for us to sit back and think and reorganize."

General Rogers speaks for the many who feel that a combination of erraticism and uncertainty in the Reagan administration and activism and confidence in the Kremlin has strained the alliance badly. There is a widespread expectation that Mikhail Gorbachev may soon come on even stronger to turn some of the West's old arms control offers back upon it, as he did with the "zero option" proposal on intermediate-range missiles. The Europeans' particular fear is now "denuclearization," seen less as deliverance than as exposure to the whims of Soviet conventional power.

But General Rogers may be too sensitive to European NATO jitters. The arms control pact that Washington ostensibly is "rushing" toward is one it put on the table, at European urging, nearly two presidential terms ago. If the alliance was not fully

committed to it then, the Europeans have had a long time to contemplate it. No one could claim that Ronald Reagan's every step, before, during and after Reykjavik, has been calculated to ease the apprehensions Europeans naturally feel during successive phases of great-power tension and flux. Still, it is odd to see a U.S. officer bouncing on the European yo-yo, wondering whether Mr. Reagan and Americans in general lean too far toward Cold War or too far toward détente. Secretary of State George Shultz, calling the Rogers statements "entirely incorrect" and "ridiculous," was understandably furious.

As for Mr. Gorbachev, Westerners have been telling themselves since he came to power that he is agile and determined to win a respite for Soviet domestic renewal. This has turned out to be true. So why do wise and experienced people like General Rogers complain that the West cannot cope? The lack of self-confidence is unbecoming, perhaps even a bit self-fulfilling. Mr. Gorbachev's European initiative is bracing but not invincible. He has good ideas and bad ones. The altered climate is also provoking Europeans to think anew about ways in which they can better care for their own defense. The contributions of General Rogers and others, the Atlantic alliance surely has the fiber to sort these various ideas out.

—THE WASHINGTON POST.

An Assault on Immunity

Two important mechanisms are bashed together in the U.S. Justice Department's strange new assault on the special prosecutor law. One is the idea that independent lawyers should investigate when high officials are charged with misconduct. The other is diplomatic immunity, which protects foreign representatives from prosecution for whatever charges are cooked up in other countries.

It is a needless collision. In its eagerness to denounce one possibly errant prosecutor, the Justice Department strains to tarnish the law that makes possible all such independent, credible inquiries.

The issues intersect in two cases. Special prosecutor Whitney North Seymour Jr. seeks to compel the Canadian ambassador and his wife to testify in the perjury trial of Michael Deaver, President Reagan's confidant and former aide. The prosecutor says Ambassador and Mrs. Allan Gotlieb are essential witnesses as to whether Mr. Deaver lied about his involvement in U.S.-Canadian affairs before leaving the White House to become a lobbyist. Mr. Seymour argues that the Gotliebs waived immunity when they agreed to cooperate, if in limited fashion. The Gotliebs and the Canadian government say they intended no waiver.

Another special prosecutor, Lawrence Walsh, who is investigating the Iran-contra affair, has subpoenaed David Kimche, who was director-general of the Israeli Foreign Ministry when he helped broker the sale of U.S. weapons to Iran through Israel. Israel claims diplomatic immunity and also cites an

agreement Congress made not to subpoena Israeli citizens to testify in the case. But Mr. Walsh argues that this legislative branch agreement cannot bind him. More difficult is the question of whether Mr. Kimche, no longer a diplomat, still enjoys immunity.

The Justice Department, eager to block renewal of the law authorizing special prosecutors, seizes on such difficulties as a further argument. In the Deaver case, the State Department and experts on international law are virtually unanimous that the Gotliebs have the right to withhold their testimony. Thus it is perfectly outrageous by the Justice Department's lights, for their diplomatic immunity to be trampled.

Yet there is a forum for resolving such questions, which the Justice Department has now employed: the federal courts. They remain open to protests of excess, whether the counsel is independent or not. If the Gotlieb claim is as solid as it appears, a federal judge will certainly honor it. If Mr. Seymour's claim is excessive, that does not taint his other work, or the work of other independent counsels.

Diplomatic immunity has many unhappy consequences, including the deportation without trial of alleged rapists. But it also protects American diplomats abroad, and may properly protect the Gotliebs and Mr. Kimche in the United States. Their cases will be argued before federal courts. That, not doing away with special prosecutors, is the way to protect diplomatic immunity.

—THE NEW YORK TIMES.

Other Comment

Soviet Actions Speak Loudest

Before rushing to make concessions in disarmament talks, the West should wait for Mikhail Gorbachev to show in actual deeds, rather than mere rhetoric, that the expansionist Soviet foreign policy of the Brezhnev era has changed. The experience with détente, accompanied as it was by a massive

Soviet buildup of nuclear missiles, indicates that caution is in order. A fixed timetable for the withdrawal of Soviet troops from Afghanistan, and a genuine reduction of Soviet troop levels in Czechoslovakia and East Germany, could reduce Western mistrust and give real meaning to the talks on conventional disarmament, while preserving security.

—Neue Zürcher Zeitung (Zurich).

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OPINION

Waldheim's Vatican Visit: Jews Feel 'Burning Outrage'

By Arthur Hertzberg

NEW YORK — In September 1971, in a synagogue in Paris, there was a new beginning in the often painful history of the relations between Jews and Roman Catholics. For the first time ever, the Vatican had sent an official delegation to meet with an equally weighty group that spoke for the major Jewish organizations.

In three days, most of the issues that preoccupy Catholics and Jews, from anti-Semitism to abortion, were aired, and the delegates discovered how long the journey was yet to be before Catholics

must the pope be his pastor? Is there no priest in all of Austria to minister to Mr. Waldheim? Is there no other way of saying to the Austrian people that they are cherished sons of the church?

Let me ask my Catholic brothers to understand the pain in a Jewish heart. I speak not of the pain of centuries but of the hurts of recent years. We have rejoiced in the zeal of the church, and especially that of the present pope, in the battle against anti-Semitism.

We know of quiet interventions for people in trouble, and it would be wrong, even at an angry moment, not to acknowledge this fraternity. But our discomforts have been growing. We are ever more convinced that in the Nazi era, and in the immediate years thereafter, the church, on balance, worried more about fleeing Nazis than it did about dying Jews.

Today, the pope continues to withhold diplomatic relations from Israel.

The memory of the Holocaust and the miracle of Israel's existence are the two high dramas, one tragic and the other glorious, of our Jewish lives. We know that the leader of our Catholic brothers remains deeply shaken by his own youthful memories of Nazi-occupied Poland and that he is glad that Jews are no longer hunted, but we fear that the pope does not feel our pain as we feel it or share in our great joy in Israel as we do.

There is burning outrage in the Jewish world at the invitation to Kurt Waldheim, and the bodies that began the formal dialogue with the church are now asking whether this relationship can continue, especially since the pope has asked that the current topic be the Holocaust.

Jewish leaders have argued about the tactics to use in the battle with Mr. Waldheim. But the Jewish world is united that a man of his past, who looked away while Jews were murdered and Yugoslav villages were burned, is not morally acceptable as a world leader. In this they are joined by all Western opinion, except for a divided Austria.

Jewish-Catholic dialogue is threatened — unless John Paul is providing the Austrian a graceful way of leaving office.

and Jews could wipe away the legacy of centuries of persecution and disrespect.

The moment of that meeting that I cannot forget was an intervention by Archbishop Roger Etchegoyan of Marseille, who is now a cardinal at the Vatican. He turned to me, at a break in the proceedings, and said: "The issues are not important, old and tragic though they may be. At this meeting, we must begin to look into each other's hearts and begin to feel each other's pain."

Pope John Paul II has now invited Kurt Waldheim to the Vatican. He has done this even though — or perhaps because — every civilized government will have nothing to do with this president of Austria, who lied about his Nazi past. I shall heed Cardinal Etchegoyan's injunction and try to look into the heart of the pope.

Mr. Waldheim is a practicing Catholic and is entitled to the pastoral concern of the church. Austria is a Catholic country, and it cannot be excluded from the love of Peter's successor. But



BY BEHRENOT, CAV/STOCK

I cannot believe that the pope expects to reverse this judgment, or even to unite Austria, by having the Swiss Guard salute Mr. Waldheim as he arrives at the Vatican gate.

My heart tells me that it is not so simple; at least, I hope so. Otherwise this will be no isolated tempest that will blow over. It will poison the highest levels of Jewish-Catholic relations.

I hope that the pope has invited Mr. Waldheim to provide him with a graceful way of leaving the presidency of Austria. If that is the promise that the pope is imposing, he will serve Mr. Waldheim the pope will then be seen as the leader of a church that wants to turn away from Mr. Waldheim's sorry past and to confront its own collective conscience. A simple whitewash by the pope of the evasive Mr. Waldheim is unthinkable.

I await good news from Rome, the news of a courageous leader acting for the future. I tremble at the thought of another regressive and angry era in relations between Jews and the church.

The writer, a rabbi, is vice president of the World Jewish Congress and a professor of religion at Dartmouth College. He contributed this comment to The New York Times.

As Reagan Declines, It's Time to Plan for the Future

By James Reston

WASHINGTON — The decline of President Reagan's influence here is more than a problem, it is an embarrassment. The capital is still hoping that he will get an arms deal with the Russians, but mainly it is turning its attention to his successor.

He will, of course, go on and on like a snuck whistle, calling for a line-item veto and a constitutional amendment to balance the budget, but the Congress is now writing him out and trying to control the damage.

It will not be easy. After he cleaned out the basement in the White House and appointed Howard Baker as his chief of staff, it was hoped that the president would compose the differences within his cabinet and improve his relations on Capitol Hill, but the new regency is still divided.

Secretary of State George Shultz had misgivings about flagging the Kuwait tankers in the Gulf just as he opposed the president's decision to ship arms to Iran. And Mr. Baker thought it was a "unique opportunity" when the Russians decided not to increase their Gulf flotilla and offered to consult on ending the war there, but the president preferred confrontation. Unfortunately, the contra hearings

will probably dominate the news this summer, with Colonel North and Admiral Poindexter on the stand testifying on what the president knew and when he knew it or forgot it. But after all this paving over the past, there will still be time to plan for the future.

With the decline of Mr. Reagan, the transition is starting earlier in this election than usual. There are some thoughtful people in both parties who recognize that the situation is too serious to be left to Mr. Reagan or the candidates who are roving around the country selling themselves.

Governor Mario Cuomo of New York, for example, is proposing the formation of a national bipartisan economic commission to study the budget, trade, monetary and other related issues so that the presidential nominees will have some considered judgments to guide them in the campaign.

Others are suggesting similar commissions on arms control, drug control, education reform and public health to assist the winners and nourish the national debate in the 1988 campaign. Their reports, of course, would not commit the nominees to

anything, but would at least be orderly and objective summaries of the principal issues for decision.

One of the major problems of U.S. presidential elections is that the winner usually staggers out of an exhausting campaign with only a few weeks to pick a cabinet and a White House staff, draft an inauguration speech, deliver a State of the Union message and construct a budget.

Unlike the chief executives of other democratic countries who have permanent undersecretaries of the various departments and agencies who carry on from one administration to the next, the winner of the U.S. election inherits little more than a party platform that he did not write and a civil service that he does not know.

This is the argument for an expanded "transition period" beginning now. The situation in November of next year will not be like November 1984 when the re-elected Ronald Reagan carried his first-term team into his second term. After the next election he will be gone, and both parties will have to begin anew.

After the assassination of President Kennedy, I spent a few days with President Lyndon Johnson at his ranch in Texas. He was grappling with this problem of transition.

"You know," he said, "I've been around Washington for quite a while, and I know some people from the South and the Southwest, but with all these jobs to fill I'm just realizing I don't really know who the good people are in the Middle West or the far West. I don't know how to find them."

He said that when he had to appoint judges, he had the help of the bar associations, and he wondered whether the press associations in the various states could not get together rosters of the most talented people in their areas. It was not his best idea but it illustrated the problem.

If the political parties were strong today, they would take on this task of preparing for the campaign, collecting data for the coming debates and mustering the best talent available.

But like the president, they are not now in a strong position. They are leaving the job primarily to the announced candidates, who are out raising money and speaking primarily for themselves.

subject to strict rules of disclosure. But no such taint attaches to other vital campaign ingredients, notably manpower and ideas. People who make their contributions by volunteering to walk a precinct or by offering to write a position paper for a candidate are deemed to be performing a generous act of good citizenship.

Why is it dangerous to contribute dollars, but not to contribute labor or thought? The answer has to lie in the eye of the beholder.

When it comes to influence on policy, few would seriously maintain that a \$1,000 contributor exerts more leverage than the person who drafts a speech for a contender or gives him his briefing on trade policy or the Gulf. But the people who write about politics, like myself, are far closer in spirit to the briefers and the ghostwriters

than we are to the big contributors. So when organizations like Common Cause, which provides the lobbying muscle behind the recurrent drive for "campaign reform," sound the alarm, we in the press tend to respond.

Frank Sorauf, a University of Minnesota professor, has demonstrated that point nicely in an article in Political Science Quarterly. He analyzes news coverage on three recent campaign finance developments in The New York Times, the Los Angeles Times and The Washington Post.

In every instance, he makes a convincing case that the coverage reflected not a partisan or an ideological bias, but a particular strain of American thought: the Progressive tradition that was a powerful force in U.S. politics from the 1890s to the 1920s.

The Progressives, as the political scientist Austin Ranney once wrote, believed that "the great enemies of society are the big political machines, the business trusts, and the other special interests that try to advance their selfish goals at the public's expense by buying elections and corrupting public officials."

Progressivism faded as a political force 50 years ago, but it remains alive and well in American journalism and in many self-styled reform organizations. The Progressives' belief in the corrupting power of money is the assumption underlying most of the current efforts to limit contributions by political action committees, or PACs, to introduce public financing of congressional campaigns and to place ceilings on campaign spending.

Reformers and journalists tend to share that Progressive tradition. They also know that their influence derives from their presentation of information and ideas, not from their wealth. It may be right to say that dollars corrupt politics while ideas enlighten it. But there is enough of a coincidence between assets and arguments to justify a degree of skepticism.

I happen to think that the rapidly rising costs of many Senate races do justify an effort to slow this form of political inflation, at least temporarily.

But there is an excess of moralism in the preachings on this topic. A pluralistic society properly should allow many channels by which people can seek to influence decision-makers. And you can see more than a tinge of intellectual elitism in the notion that only money corrupts.

The writer is a consultant to the UN Development Program, contributed this to the International Herald Tribune.

Yes, Collar the 'Fat Cats,' but Let's Curb Ourselves Too

By David S. Broder

WASHINGTON — I was listening to a presidential candidate — it happened to be Joe Biden, but it could have been any one of them — talk the other noon. He mentioned an all-day meeting with some economists. He repeated some of the ideas he had gotten from them. And suddenly I was reminded of a peculiar slant in the coverage of politics in America.

Suppose Mr. Biden had said he had spent the day with his big contributors. The reporters around the table would have pummeled him with questions about what these "fat cat, special interest" guys wanted in return. But because he was talking about idea merchants, no one blinked an eye.

When it comes to campaigns, dollar contributions are deemed to be potentially or actually corrupting. The view is that they need to be limited — as the Senate is again struggling to do — or at least made

subject to strict rules of disclosure. But no such taint attaches to other vital campaign ingredients, notably manpower and ideas. People who make their contributions by volunteering to walk a precinct or by offering to write a position paper for a candidate are deemed to be performing a generous act of good citizenship.

Why is it dangerous to contribute dollars, but not to contribute labor or thought? The answer has to lie in the eye of the beholder.

When it comes to influence on policy, few would seriously maintain that a \$1,000 contributor exerts more leverage than the person who drafts a speech for a contender or gives him his briefing on trade policy or the Gulf. But the people who write about politics, like myself, are far closer in spirit to the briefers and the ghostwriters

than we are to the big contributors. So when organizations like Common Cause, which provides the lobbying muscle behind the recurrent drive for "campaign reform," sound the alarm, we in the press tend to respond.

Frank Sorauf, a University of Minnesota professor, has demonstrated that point nicely in an article in Political Science Quarterly. He analyzes news coverage on three recent campaign finance developments in The New York Times, the Los Angeles Times and The Washington Post.

In every instance, he makes a convincing case that the coverage reflected not a partisan or an ideological bias, but a particular strain of American thought: the Progressive tradition that was a powerful force in U.S. politics from the 1890s to the 1920s.

The Progressives, as the political scientist Austin Ranney once wrote, believed that "the great enemies of society are the big political machines, the business trusts, and the other special interests that try to advance their selfish goals at the public's expense by buying elections and corrupting public officials."

Progressivism faded as a political force 50 years ago, but it remains alive and well in American journalism and in many self-styled reform organizations. The Progressives' belief in the corrupting power of money is the assumption underlying most of the current efforts to limit contributions by political action committees, or PACs, to introduce public financing of congressional campaigns and to place ceilings on campaign spending.

Reformers and journalists tend to share that Progressive tradition. They also know that their influence derives from their presentation of information and ideas, not from their wealth. It may be right to say that dollars corrupt politics while ideas enlighten it. But there is enough of a coincidence between assets and arguments to justify a degree of skepticism.

I happen to think that the rapidly rising costs of many Senate races do justify an effort to slow this form of political inflation, at least temporarily.

But there is an excess of moralism in the preachings on this topic. A pluralistic society properly should allow many channels by which people can seek to influence decision-makers. And you can see more than a tinge of intellectual elitism in the notion that only money corrupts.

The writer is a consultant to the UN Development Program, contributed this to the International Herald Tribune.

For Seoul, Stern but Quiet Talk

By Flora Lewis

SALZBURG — The violent crisis in South Korea goes on. It will leave more bitter scars in a country that has many resentments to cherish, and whatever the United States does now, anti-American feelings are stoked.

There is little prospect of any early euphoric ending of an era, since election stolen from Corazon Aquino and reclaimed by the will of the people caused in the Philippines. The problem is not just President Chun Doo Hwan. It is the perpetuation of a tough, military-run regime in a country that has made extraordinary economic and social progress in a generation. Politics tags behind.

And it is a reflection of the strains added when a country undergoing the difficulties of rapid change is also a key player in the East-West conflict. Like leftist youths in West Germany, the South Korean demonstrators have their own ideas for the country they live in, and they do not see why they should think instead about the Communist regime next door.

Unlike the Germans, they have not had democratic experience. The country was ravaged by a half-century of Japanese occupation. When North Korea invaded in 1950, it had scarcely begun to revive. Since then, protected by 41,500 American troops, it has flourished and made an enormous mark on the world of commerce.

But it is still partitioned, still starting as a sense of less than complete independence. President Jimmy Carter planned to withdraw U.S. troops, which probably would have been a good idea in terms of the development of internal South Korean politics as well as in terms of cost to the United States.

It was a bad idea strategically, so demonstrably bad as debate broke down and Moscow pushed at soft spots around the globe that he canceled it. The troops remain and guard the front effectively.

North Korea is still a taut, opaque, heavily armed state with undisciplined ambitions. Kim Il Sung is aging, but he has not begun to bend in the direction of reforms that even Vietnam, behind China and the Soviet Union, has come to admit are necessary.

From time to time, there have been gestures toward minimum accommodation between the two halves of Korea. But they never get far. There is nothing like the human contacts between the two Germans, actively and expensively encouraged by Bonn, to ease the pain of partition.

It is a shame that Seoul was not willing to accede to Pyongyang's demand for a larger share as host to Olympic events. That would have forced some opening of North Korea and provided a test of what lies beneath the surface. Nobody knows Mr. Kim is trying to assure that the regime will be unchanged by preparing the succession of his son, which may or may not work. It would be imprudent for South Korea to let down its guard.

This is not a good enough argument for keeping what is essentially a military regime without its own forces, muzzling the democratic aspirations of the South. On the contrary, the refusal to consider constitutional reform before next year's Olympic Games and the failure to persuade the opposition that elections will be fair are causing the trouble now.

Even the Olympics are threatened. They should be moved unless there are clear signs fairly soon that the government is prepared to calm the atmosphere by seeking reconciliation with its people, and it is to be hoped it has now reached the point of decision. The demands are not new. Twenty years ago students were rioting in Seoul, calling for democracy. Now their children are doing the same, and they will not be denied indefinitely.

The dilemma for U.S. policy has no easy answer. Urging the government to talk to the opposition and to show restraint has not had much effect. Inevitably, many Koreans hold the United States responsible for the survival of repression. In the eyes of the demonstrators, doing nothing to oppose it is a proof of support.

But this is not a case for sanctions, certainly not trade sanctions, which would immediately be seen as a U.S. trick to limit Korean competition with a thin excuse. Some stern talk is needed, preferably in private so as not to stiffen the confrontation.

Americans made a huge sacrifice to safeguard Korea's chance for its present prosperity and its hopes for democracy. The United States has a right to press the government to fulfill those hopes. But it is also paying the price of focusing too much on global rivalry when the people directly involved have their own priority.

The writer is a columnist for the New York Times.

IN OUR PAGES, 75 AND 50 YEARS AGO

1912: Taft Is Nominated

CHICAGO — President Taft has been renominated on the first ballot [by the Republican National Convention on June 22]. The vote was: Mr. Taft, 561; Theodore Roosevelt, 101; Senator LaFollette, 40; Senator Cummins, 17; and Justice Hughes, 2.

NEW YORK — The Democrats are discerning enough to see that the only hope of victory is harmony [at the Democratic National Convention opening June 24 in Baltimore]. The New York World says: "A hack or a reactionary nomination at Baltimore would bring back Mr. Roosevelt as an independent candidate, in which capacity he would poll as many Democratic as Republican votes, leaving the Democratic party with the sorry skeletons of a dozen States."

The New York Herald adds: "If the Democrats do not pick their steps and accept good guides, they will be in the tangles of Chicago."

1937: Riots in Trinidad

PORT-OF-SPAIN, Trinidad — With one man killed and eight wounded in an attack by strikers on the San Fernando telephone exchange [on June 21], the casualty list of Trinidad oil riots, which began in the domain of the United British oilfields [on June 19], has now reached 12 dead and more than 60 injured. San Fernando, the center of the oil district in the southern part of the island, is a city of terror. Six strikers were shot as they tried to storm a police car near San Fernando [on June 21], while fighting was reported at the Point Fortin plant of the United British Company. Harbor workers and public works employees in all parts of the island struck [on June 22]. Governor Sir Murchison Fletcher has called out all available citizens to serve as special constables. The British carrier Ajax arrived at Pointe-à-Pierre and landed four parties of marines and sailors.

OPINION

When Helms & Co. Pursue Policy by Wrecking-Ball

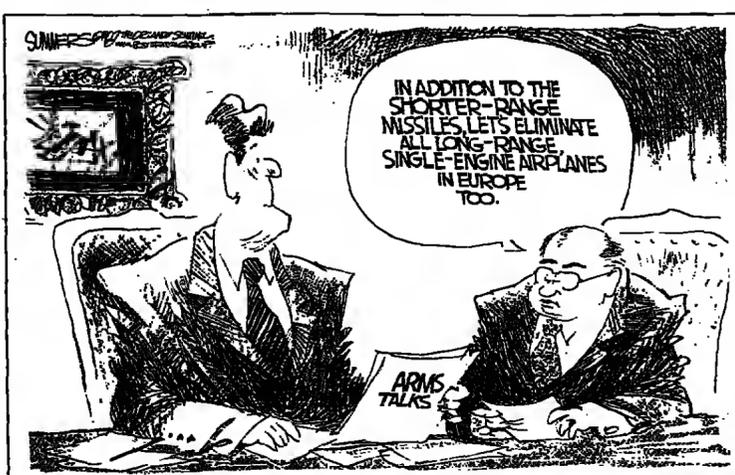
By Philip Geyelin

WASHINGTON — What with the Boland amendment and Nicaragua, or the War Powers Act in the Gulf, one year for a clear-cut case to sharpen the mind-bending debate over the respective roles of Congress and the executive in the making of foreign policy.

Helms's current target is '100 percent guilty' of supporting U.S. policy.

east coast of Africa, scarcely qualifies as a top-priority U.S. security concern. But even as a microscopic case study, this one has macro-implications that only begin with the memo-minded mischief-making of Senator Jesse Helms of North Carolina or the ideological boogymen of the far right.

introduce economic and social reforms, and reach out to the West. The results fall well short of a break with Moscow or Marx. But they were sufficiently impressive to bring an invitation to the White House for Mr. Machel from Ronald Reagan in 1985.



LETTERS TO THE EDITOR

The Iran-Contra Affair: An Issue of Legal Boundaries

Regarding the opinion column "Congress Is Invading the President's Space" (May 27) by George F. Will: The Reagan administration now argues that the Boland amendment [restricting U.S. support for the Nicaraguan rebels] did not apply to the president or the National Security Council. This sounds like a prelude to yet more damaging revelations.

Regard for Earth's 'Crew'

I find Jonathan Power's opinion column, "Population: Don't Be Frightened by the Numbers" (April 27), to be a very narrow analysis of the problem raised by the world's galloping birthrate.

The 'Perfect' Dad's Day Gift: An Embarrassment of Riches

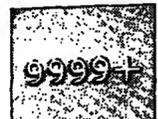
By William E. Geist

NEW YORK — "Subway Vigilante" is a lovely song with a nice melody and a real folksy quality," asserts Ronald Gold, whose group recorded the number, subtitled "The Ballad of Bernhard Goetz." "It is sing-

able, hummable and danceable — the perfect Father's Day gift." Mr. Gold is the lead singer of Ronnie & the Urban Watchdogs, a yet to be popular group. He had about 500 records on hand for Father's Day but rush-ordered 10,000 more after the acquittal of Mr. Goetz of all but one charge.



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Nations in Region Are Distancing Themselves From Reagan

By William Branigan
Washington Post Service
TEGUCIGALPA, Honduras — As the Iran-Contra affair drags on in Washington, the prospect of a weakened Reagan administration is causing increasing nervousness in Honduras and other Central American countries...

The nervousness is prompting Central American nations friendly to the United States to make a greater effort to distance themselves from Reagan administration policy in their region and from the Nicaraguan rebels supported by Washington, the sources said.

Anxiety among both the Hondurans and the contras stems from a concern that U.S. funding for the rebels will not be renewed or will be severely restricted, leaving the rebels unable to remain inside Nicaragua to press their war against the government.

The Hondurans are reassessing their relations with the United States, a Western diplomat said. "The military for their own reasons are taking a harder line vis-à-vis the contras."

Honduran military authorities are beginning to grow jittery about what will happen when a new U.S. president takes office in 1989 "or maybe even before," said a source close to the Honduran Army.

For us, the important consideration is that the Iran-contra scandal weakens enormously the policy of the Reagan administration in Central America, said Manuel Acosta Bonilla, a leading Honduran lawyer and opposition politician.

Developments in Honduras have underscored growing resistance within Honduras to operations by the contras from its territory.

In May, the opposition National Party sent a three-member delegation to Washington to discuss U.S. policy in Central America with administration officials and congressmen.

In one meeting with a State Department group headed by the assistant secretary of state for inter-American affairs, Elliott Abrams, the Hondurans asked if the United States had any contingency plan in case aid to the contras were cut off and the rebels had to retreat into Honduras, according to one Honduran participant, Gilberto Goldstein.

He said his group was told that there was no need for a contingency plan because U.S. aid would continue and the United States had never abandoned its friends.

The unwillingness of U.S. officials to talk about a contingency plan left the Hondurans uneasy, Mr. Goldstein said.

"We believe it is completely the decision of the U.S. whether to support the contras or not," he said. "However, if the decision is not to give support, we feel there is a moral obligation on the part of the U.S. government to find a solution for the contras, and not in Honduras. We could not possibly host a frustrated, defeated, armed, angry group of rebels."

Last week three members of a new contra umbrella organization, the Nicaraguan Resistance, arrived in Tegucigalpa for a meeting.

In an apparent reaction against the publicity surrounding the meeting, Honduran authorities asked the three contra leaders to leave and let it be known that three others planning to arrive from Costa Rica should stay home, Honduran sources said.

The Iran-contra hearings, meanwhile, resume Tuesday in Washington following a two-week recess.



Wreckage of a vintage Bristol Blenheim lies on a golf course near London.

Golf Course Claims a Bristol Blenheim

LONDON — The dreams of a group of aircraft restorers lay in ruins on an English golf course Monday after the only flying example of a World War II Bristol Blenheim fighter-bomber crashed.

COURT: Brennan in Charge

(Continued from Page 1)
ently was designed to appeal to someone," Mr. Tribe said.

One open question last fall after Chief Justice Rehnquist was confirmed was whether he would moderate his views and move toward the center of the court or continue to be a purist, Mr. Tribe said.

The difference is that last year Justice Brennan controlled only about 19 opinions in cases when he was in the majority and Mr. Burger in dissent.

This term he has already assigned about 28 opinions. He wrote only 13 majority opinions last term. This term, he has written 16.

Penalty Is Upheld In Bolles Murder
WASHINGTON — The U.S. Supreme Court reinstated Monday the death sentence of John Harvey Adamson, convicted in the 1976 bombing murder of Don Bolles, an investigative reporter for The Arizona Republic.

On a 5-4 vote, the justices ruled that Mr. Adamson's protection from double jeopardy was not violated when the state tried him for murder after he reneged on a plea agreement.

The opinion by Justice Byron R. White reversed the 9th U.S. Circuit Court of Appeals, which ruled that Mr. Adamson was improperly put on trial for his life after he had been sentenced to 20 years in prison as part of a plea bargain.

KOREA: Chun Makes Concessions
(Continued from Page 1)
plans Monday to Mr. Roh and other ruling party officials. Moreover, important details that could affect the success of any of the overtures were not made clear.

Aides to Kim Young Sam, for example, said they had only read about the proposed meeting in the newspapers and had not received an invitation directly from the Blue House, the presidential residence.

It also was uncertain if Mr. Chun would agree to meet with Mr. Kim one on one, as the opposition leader demanded, or only as part of a larger group that would include leaders of minor anti-government parties.

Perhaps more important, the concessions did not touch at all on the most critical issue: what the ruling side will say, sometime this week, about revising the constitution to make its provisions for selecting a national leader more democratic.

It was this issue that set the crisis in motion, creating a clamor for its resolution not only from the opposition but also from national assemblymen in the ruling party.

Mr. Chun seems to be moving toward a decision that in effect would overturn his order on April 13 to suspend discussion of constitutional change until after the 1988 Seoul Olympics. But nothing was said Monday about the matter.

Gaston J. Sigur Jr., the U.S. assistant secretary of state for East Asian and Pacific Affairs, was due to arrive in Seoul on Tuesday, but U.S. officials insisted that Mr. Sigur "doesn't have a message to bring."

Earl (Madman) Muntz, Zany Car Dealer, Dies

The Associated Press
RANCHO MIRAGE, California — Earl (Madman) Muntz, 73, whose zany ads for used cars were the butt of jokes by radio comedians, died Saturday of lung cancer.

Mr. Muntz was also a manufacturer of TV sets and car radios. He began dealing in cars as a teen-ager in Elgin, Illinois. He moved to Los Angeles in the 1940s and started an offbeat ad campaign on billboards and the radio.

He defied the notion that used-car salesmen ought to project a staid image. He was portrayed on billboards as a cartoon figure in red flannel underwear and a three-cornered hat.

Mr. Harwood joined what was then Harper & Brothers in 1930 as assistant treasurer and served the company in executive posts through much of the tenure of its leader, Cass Canfield.

Other deaths:
Herman H. Berger, 71, a retired Foreign Service officer who helped negotiate free trade agreements with Europe and Japan during the 1950s, June 15 in Bethesda, Maryland, of cancer.

ASTAIRE: Dancer Dies at 88
(Continued from Page 1)
dancer, not necessarily because of his voice but by his conception of projecting a song."

"Dancing is a sweet job," Mr. Astaire said when he was 66. "You can't just sit down and do it, you have to get up on your feet. When you're experimenting you have to try so many things before you choose what you want, that you may go days getting nothing but exhaustion. This search for what you want is like tracking something that doesn't want to be tracked."

Mr. Astaire kept himself and his own ability in perspective as the years went by with his capacity for agonizing self-appraisal. He stopped dancing about 1970.

"I don't want to be the oldest performer in captivity," he said nearly a decade later.

The Astaire dance story did not start at birth, but was begun not long after that event, which took place in Omaha, Nebraska, on May 10, 1899. His name was Frederick Austerlitz, the same as his father's, a brewer worker and an emigrant from Austria who during World War I anglicized the family name to Astaire.

As soon as the boy could, he toddled along with his mother to pick up his sister, Adele, who was 18 months older than Fred, at dancing school. She was outstanding as a dancer at 6 and it was not long before their mother, Ann Gertrude Austerlitz, had Fred studying ballet there, too, at 4.

A few years later, Mrs. Austerlitz took the children to New York to break into show business. When Fred was 10, he and Adele made their first professional appearance — in vaudeville — in Keyport, New Jersey. They went on to become one of the best-known dance teams in the country.

His first movie was "Dancing Lady" (1933), with Joan Crawford and Clark Gable. This was followed the same year by "Flying Down to Rio," in which he appeared with Ginger Rogers.

TUNISIA: Role of Islam Is at Center of Ferment

(Continued from Page 1)
minister who is the most prominent leader of the secular opposition.

The authorities' response to the crisis has been harsh. Mosques and homes were reportedly raided in the recent roundup of supposed militants. According to Mr. Mesirizi, the authorities uncovered a computer disk listing the names of the movement's sympathizers.

The accusations of torture were repeated in a statement Wednesday by the Islamic Tendency Movement. The statement denied collusion with foreign powers, including Iran, and said the police had beaten the group's detained members.

turned their hair and poured urine into their mouths during interrogations.

The government denied the accusations of torture and said it had furnished sufficient proof of the fundamentalists' links with foreign powers.

Government officials acknowledged that the Islamic Tendency Movement may have projected a moderate image, but they say that was part of a conspiracy cloaking a violent, long-term desire to seize power by Iran, whose government, they say, draws only a slender distinction between legitimate opposition and treachery.

Official accounts, the Iranian Embassy had circulated tracts calling for the revolutionary overthrow of the government and had financed trips by Tunisian fundamentalists to the Iranian city of Qum for training in revolutionary warfare.

Government officials say the Iranian Embassy also circulated video cassettes offering instruction in the tactics of street insurrection and sought to infiltrate the university and mosques to recruit the devout.

But the authorities have not produced evidence of direct financial or organizational links between the Iranians and Mr. Ghanouchi.

In the 1970s, some specialists argue, Mr. Bourguiba encouraged the teaching of Islamic values at the country's restive universities, supposedly as a bulwark against Communism. The authorities said the number of mosques built by the government increased from 800 in 1960 to almost 2,500 in 1987.

The country's Communist Party has since been legalized while similar legal status has been denied the Islamic movement.

This rejection, some specialists argue, may have helped strengthen Islamic sentiment that Tunisia's venerated Westernization, reflected in the emancipation of women and the separation of church and state, has denied traditional religious values.

"Islam has been denied all opportunity to intervene in secular problems," said Mustafa Filali, a writer with opposition sympathies.

NUCLEAR: A Stillness Haunts Towns Near Chernobyl

(Continued from Page 1)
Officially bristle at the mention, and dismiss the reports as "subjective" reporting, based on rumors.

In recent months the Soviet government has allowed foreign journalists to visit Prip'yat, and even the Chernobyl plant, which had been off limits since the accident.

No one will say for sure when Prip'yat will be repopulated, although it has been listed among the settlements where decontamination efforts have been halted for the time being.

Sixteen of the zone's 179 inhabited areas have been repopulated, Mr. Kovalevko said, and another 55 are being readied.

AIRPORT: After Ruling, Fears of Solicitation Abuses

(Continued from Page 1)
International Society for Krishna Consciousness, or the Hare Krishnas, the Unification Church of the Reverend Sun Myung Moon, and the organization of Lyndon H. LaRouche Jr., a conspiracy theorist and fringe political figure.

Security officials say that at a growing number of airports new groups have appeared recently asking passengers for money and claiming the right to do so under the First Amendment.

"We have religious groups fight-

ing over territory at the airport," said Maurice McDonald, manager of Lindbergh Airport in San Diego. "We have ladies that look like nurses but they aren't; men who look like priests who aren't; kids in training to be Hare Krishnas."

"They just pose on the servicemen," he said. "They dazzle them with sweetness. If you're 17 or 18 years old and haven't seen anybody but a drill sergeant for 14 weeks and someone smiles at you and says, 'Hi, where you from?' you might donate, too. The city attorney has said that as long as they are a bona fide religious organization they can solicit, but anyone can be one, you can't; all you need is a plastic badge."

The Reverend James Bradford of the United Mission Church, which rescues many of the city's homeless, said that many of the men soliciting at airports were recruited on Okinawa by an entrepreneur who skirted the law by entering a busy place like an airport can take in \$100, \$150 a day, he said. "But they're hurting legitimate people trying to help the homeless. They're frauds and they're killing us."

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BEIRUT: Release Rejected

(Continued from Page 1)
freed in the foreseeable future. If at all.

President Hafez al-Assad of Syria, with 7,000 of his troops deployed in the West Beirut area, has sent a senior officer to Beirut to intensify Syrian efforts at freeing the hostages.

Brigadier Ghazi Kanaan, chief of intelligence for the 30,000 Syrian soldiers stationed in Lebanon, said that Mr. Assad had taken a special interest in the case.

"I am here to find the hostages," the Syrian officer said after a one-hour meeting Sunday night with Sheikh Mohammed Hussein Fadlallah, the spiritual leader of the Iranian-backed Hezbollah, or Party of God.

The Beirut news media has said that radicals in Hezbollah seized the three men, but Hezbollah has issued repeated denials.

Brigadier Kanaan declined to comment when reporters asked how he planned to free the hostages if their captors did not agree to free them.

Lebanon's justice minister, Nabih Berri, has been active as well in the search for the captives.

INTERNATIONAL CLASSIFIED (Continued from Back Page). Includes sections for EMPLOYMENT, AUTOS TAX FREE, LOW COST FLIGHTS, ACCESS VOYAGES, LEGAL SERVICES, FOR SALE & WANTED, COLLEGES & UNIVERSITIES, and AUTO SHIPPING.

Large vertical advertisement on the right edge of the page, partially cut off, with the word 'Kassel' at the top and 'Cantone Between' visible.

ARTS / LEISURE

Kassel's Disappointing 'Documenta'

By David Galloway
KASSEL, West Germany — Located within peering distance of the East German border, this seems an improbable destination for the cultural pilgrim.

want to take art marathons in stride. The Fridericianum, too, reflects the changing times. The recent and radical renovations have produced a warren of concrete halls and cubicles that would better serve as the bottling-plant for a local brewery.

illustrated by a new generation of sculptors who have adapted the form-language and materials of architecture — by definition, a more "public" medium.

photograph. There is no European video artist who commands this virtuoso mastery of craft. Even Nam June Paik, who presents a superb video homage to Joseph Beuys, seems quaintly old-fashioned in comparison.

Beuys's provocative posturings might have lent this exhibition the cutting edge it lacks. Yet the great shaman is not entirely absent.

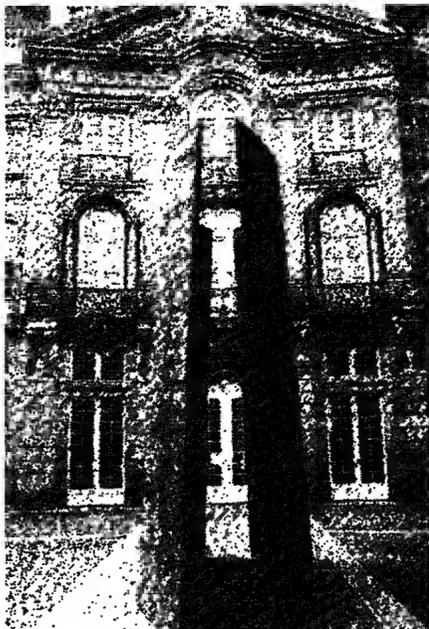
If plucking the raiisra from Kassel's indifferent fruitcake is insufficient reason for visiting Germany's frontier outpost, a stop in Münster more than compensates, to visit its open-air sculpture festival.

Richard Serra's work has never looked more eloquent or persuasive than it does before the baroque palace of Erdrostenhof. And on the lawn beside the local music school, Keith Haring's familiar mutt howls at the sky.

Wandering in the city, map in hand, or renting a bicycle to see the artistic sites, visitors can regain the sense of discovery that was once synonymous with Documenta.

"Documenta 8," until Sept. 20. "Sculpture Projects Münster," until Oct. 4.

David Galloway is a writer and professor based in West Germany.



Serra's "Trunk," eloquent at the Münster sculpture festival.

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Cantonese Opera, Caught Between Past and Future

By Nicholas D. Kristof

HONG KONG — A lily 72-year-old who still emits in his back flips, Sun Matsui is the lord of Cantonese opera. An energetic man whose hands flutter through the air as he speaks, Sun packs theaters with his fans, who are often so overwhelmed with his grace and singing that they throw rings and necklaces and money upon the stage after a performance.

Not everyone is so impressed, however. His 9-year-old daughter confesses that she does not like Cantonese opera. She prefers Alan Tam, the Hong Kong pop singer, whose melodies resemble rock songs everywhere.

And therein lies the challenge for Cantonese opera, and indeed for much of Chinese culture: How can traditional arts such as opera or calligraphy, which flowered with

one of the world's greatest civilizations, attract today's generation of denim-clad Chinese, seduced by Western songs, films and way of life?

To a foreign ear, Cantonese opera may be a musical experience rivaled only by a classroom of second-grade maestros scratching their fingernails on a blackboard. Yet, if the singing is an acquired taste, the grace and subtlety of movement impress even the most callow observer.

Like its northern cousin, Peking opera, Cantonese opera combines a libretto that borders on poetry with magnificent costumes and choreography. The movement and makeup in Cantonese opera, however, often seem more natural than those of Peking opera. And Peking opera is performed in Mandarin Chinese instead of the Cantonese dialect spoken in Hong Kong.

Older people in Hong Kong still love Cantonese opera, and prize it as the bulwark of traditional culture. Its heyday, in fact, came during this century, from the 1920s to the 1950s. At a government-subsidized performance this month in a Hong Kong gymnasium, operagoers, many of whom could remember foot binding and Imperial China, began lining up more than an hour before the performance and filled every nook of the auditorium.

Young people spurn Cantonese opera partly because of its complexity and subtlety — which, to others, are its virtues. Every gesture, every swish of a long white sleeve, every tint in the painted faces conveys meaning. A whip in the hand means that the actor is riding a horse; a red face suggests righteousness and a white face, craftiness.

Therefore the dilemma for Cantonese opera is whether to maintain

traditional purity, or to make opera more accessible by modifying it. In essence it is the same question that Western culture faces: Should Shakespeare be translated into a modern idiom, or can an Italian opera be performed in English? Without adaptation, traditional cultural achievements — such as Tang Dynasty poetry in China or Ovid's Metamorphoses in the West — tend to wither in influence.

The quandary may be particularly acute in the Chinese world, where conformity to artistic tradition plays a greater role than in the West. Chinese painters, for example, traditionally copied the exact works of their masters over and over.

In the United States, it sometimes seems as if every 25-year-old director feels obliged to interpret Sophocles in a radically new way, often a tribute more to imagination than to judgment. In the Chinese world, on the other hand, the artist feels obliged to follow his elders.

Cantonese opera, which dates from the first half of the 18th century, has changed in some ways. Early in this century many libretti were written in colloquial language. Western instruments are sometimes found in the orchestras. Sets are more elaborate, and microphones are common. "It is good to change, to keep good elements while allowing others to die out," said Leung Fukman, an expert on Chinese opera at the Chinese University of Hong Kong.

Cantonese opera originated with troupes who wandered from village to village, performing in the streets or in teahouses. Even today, Cantonese opera is more the Oriental equivalent of vaudeville than of Western opera. In Hong Kong, an opera is a casual evening out, to which the Chinese wear old clothes and perhaps gnaw on a chicken foot during the performance.

Western opera connotes sophistication, so people might feign enthusiasm even if they do not feel it. But the folding chairs, constant chatter and discarded chicken



Every tint in the make-up conveys meaning.

bones in the audience of Cantonese opera suggest to some young people a legacy that is more embarrassing than inspiring.

Today the greatest cultural stars in the Chinese world are pop singers like Alan Tam and Anita Mui, whose rock music is based on Western and Japanese styles; or cello-lid heartthrobs like Jackie Chan, a martial arts expert who is Hong Kong's most eligible bachelor. Cantonese opera huffs scoff at the crooners, just as devotees of Barok or Brahms may be put off by Bruce Springsteen or Barbra Streisand.

For all of the obstacles facing Cantonese opera, there does seem to have been a modest revival in the last few years. Last year, for example, some 22,000 people attended performances in the New Territories section of Hong Kong, up from 15,000 a year earlier. A few new troupes have also been organized. But even opera singers say that the principal reason for the revival is increased support from local governments.

While some young performers study Cantonese opera, there are no sweeping attempts to reinterpret the medium. Few new libretti are written today, and no Arthur Miller has appeared to substitute modern themes and everyday people for the old folk tales, kings and generals that usually dominate the operas. Even the younger students of Cantonese opera sometimes regard it as only a sideline.

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DOONESBURY



Pyramid Corridor Find

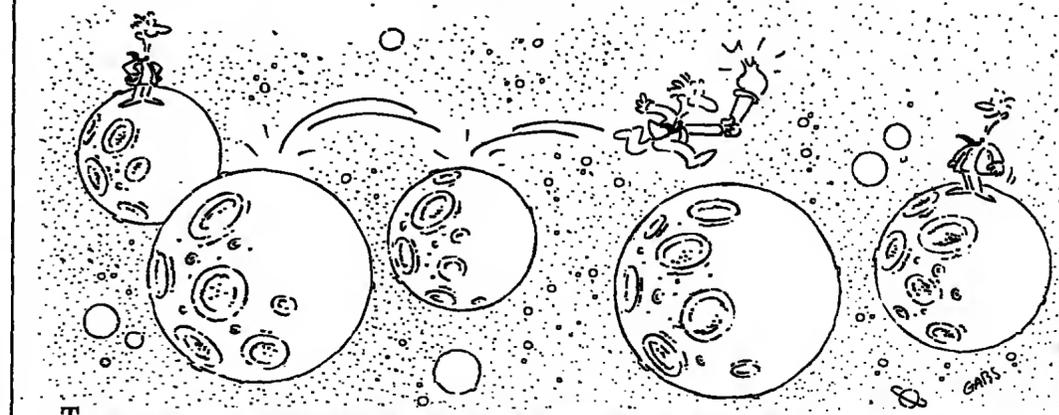
CAIRO — Japanese researchers may have found part of a corridor leading to the queen's funerary chamber in the Cheops pyramid, the semi-official Al Ahram daily said on Monday. Al Ahram quoted the head of the Egyptian Antiquities Office, Ahmed Kadri, as saying that the discovery was made by a team from Tokyo's Waseda University, and had revealed the existence of a cavity near the queen's funerary chamber.

The researchers used an electro-magnetic device to sound the depth of the pyramid as far as 10 meters (33 feet) deep. A more sophisticated device capable of sounding the depth of the pyramid as far as 100 meters was needed to confirm the finding.

Kadri added that Egyptian scientists would meet with officials of the Ministry of Scientific Research to discuss the future of these findings "considering the importance they represented."

Advertisement for Sunetta House St. Moritz, a holiday oasis for the individual guest. The ad describes the traditional elegant style of the Grand Etage and the casual atmosphere of the new Club-Etage. Contact information: CH 7500 St. Moritz, R.F. Müller, Mgr. Phone 082 2 11 21. Fax 082 - 3 85 24. Telex 74 491.

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NYSE Index table with columns for High, Low, Close, Chg. and rows for Composite, Industrials, etc.

Monday's NYSE Closing logo and text: Via The Associated Press

AMEX Diary table with columns for Close, Prev. and rows for Advanced, Underwritten, etc.

NASDAQ Index table with columns for Close, Chg., Prev. and rows for Composite, Industrials, etc.

AMEX Most Actives table with columns for Vol., High, Low, Last, Chg. and rows for Wagon, Lincoln, etc.

Dow Jones Bond Averages table with columns for Class, Chg. and rows for Bonds, Utilities, etc.

NYSE Diary table with columns for Close, Prev. and rows for Advanced, Declined, etc.

Odd-Lot Trading in N.Y. table with columns for Buy, Sell, % of 100 and rows for June 19, 20, etc.

Dow Jones Averages table with columns for High, Low, Close, Chg. and rows for Industrials, Utilities, etc.

Standard & Poor's Index table with columns for High, Low, Close, Chg. and rows for Industrials, Utilities, etc.

NASDAQ Diary table with columns for Close, Prev. and rows for Advanced, Declined, etc.

AMEX Stock Index table with columns for High, Low, Close, Chg. and rows for 300.74, 538.87, etc.

Tables include the nationwide prices up to the closing on Wall Street and do not reflect late trades elsewhere.

Large table of stock prices under 'A' section, listing various companies and their prices.

Dow at Record as Buyers Return

United Press International NEW YORK — Prices on the New York Stock Exchange continued their advance Monday as buyers returned to equities after two weeks of hesitation...

Table of stock prices under 'B' section, listing various companies and their prices.

Table of stock prices under 'C' section, listing various companies and their prices.

NEW NEW NEW NEW NEW ENTERTAINERS GOLD advertisement with logo and text.

Table of stock prices under 'D' section, listing various companies and their prices.

Table of stock prices under 'E' section, listing various companies and their prices.

Handwritten note: JAY CO 12/20

Technology Quarterly

Issue No. 1

DEPARTMENTS

Research 11

New York to Tokyo in three hours? More than fantasy, that is what aerospace experts are planning with the superfast hypersonic planes of the future.

Developments 12

In a thermonuclear war, detection of noise produced by the propeller of a single missile submarine could prevent the destruction of scores of cities. That's why a recent sale of Japanese technology to Moscow has helped sour U.S.-Japanese relations. The details.

Workplace 13

For Sweden's highly innovative automobile industry, the manufacturing system of the future will be built on a lesson from the past: the human factor is the key to performance.

At Home 14

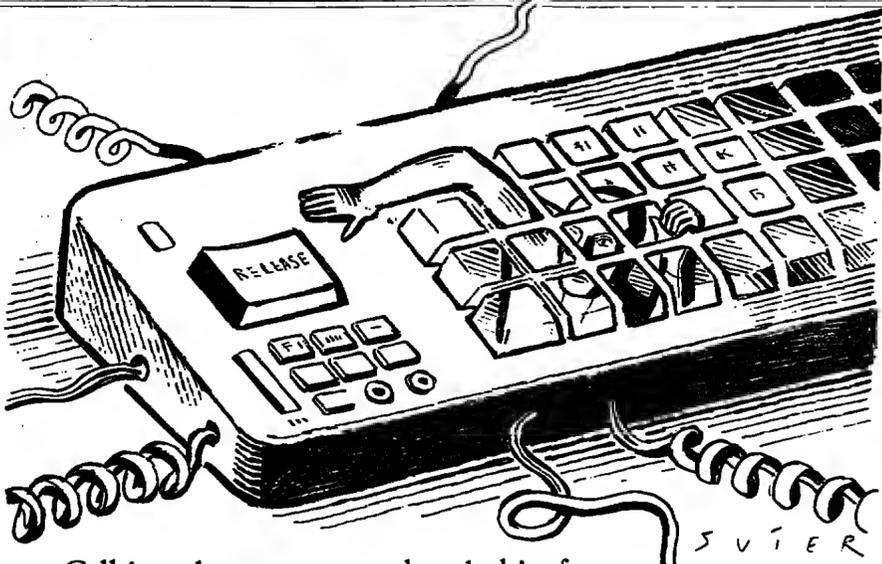
Just when you thought you had the very latest in audio-video equipment, you're hopelessly out of date. The latest must-have product: compact disc video.

Interview 11

To most mortals, the limits of space are as short as the imagination. To Patrick Baudry, a French astronaut, the concept of conquering space is as long as several millennia and defined only by the limits of the human mind.



Down to Earth: Patrick Baudry signing autographs.



Call it techno-stress or cyberphobia, for low-tech man, it can be catastrophic.

As the Dream Machines Arrive, So Do the Neural Nightmares

An Essay
By Curt Supplee

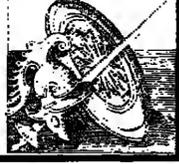
WE HAVE SEEN the future and it hurts. Thanks to the high-tech explosion, we are suddenly up to our nose cones in alarm watches, car phones, beeper pagers, portable TVs, automated teller machines, talking cameras, speed-grab vendors, electronic mail, microwave chow-blasters and computers. No wonder we are twitching like lab rats. Our offices are now "open architecture" caverns bristling with "privacy" panels; the venerable desk a "workstation"; the principal tool a video display terminal. Everything that isn't beeping is getting ready to boot, bong or buzz. Everything that isn't running too fast is either broken or out of date. The net result is a neural nightmare. Call it techno-stress or cyberphobia, for poor low-tech man, an amiable hominid still getting used to walking erect, the strain can be catastrophic. It wasn't supposed to happen that way. Back in the optimistic 1950s, when the phrase "labor-saving device" was uttered in tones of grateful reverence, it was assumed that our pulsating technological progress would produce a self-defrosting nirvana of unprecedented leisure. What we got instead was a sort of historical bait-and-switch: In place of a gizmo paradise of "spare" time, we found ourselves forced to cram more events into the same interval at the behest of high-speed machines that are increasingly incomprehensible. Which may explain why you are having trouble concentrating these days. The combination of more and briefer events arriving at ever-diminishing intervals constitutes a vast behavior modification pro-

gram, making the threat of shortened attention span a self-fulfilling prophecy. According to a University of California Los Angeles research team, concentration suffers most in tasks where people are required to interpret new events by comparing them to events in short-term memory, and where new events occur rapidly. Time pressure compounds the problem. Hence the agonies of air traffic controllers. And yet that is also a fairly accurate description of modern life. You are flipping between programs on your PC when the phone rings — a voice-synthesizer solicitation for radar detectors. But you are interrupted by the call-waiting tone. It's your doctor calling from his car phone with the results of your CAT scan. Your blood pressure hits max just as your pager begins to beep. Up to a point, stress works to our advantage, generating brain chemicals such as dopamine and norepinephrine which enhance our attention capabilities. But when the input is too great, the system crashes. And here in the silicon decade, says Dr. Mardi J. Horowitz, director of the Center for the Study of Neuroses at the University of California San Francisco, we may be approaching overload. "When a person is presented with a stimulus, especially one that is jangling in some way, a series of conceptual and emotional processes are set in motion," he said, at both the conscious and unconscious levels in "multiple channels of consideration." But when the next jangle comes too soon, the flow is blocked.

Continued on page 10

Live-in-Bed Research Prepares Spacemen For Flight to Mars

Experiment simulates long-term exposure to weightlessness.



By Kathy Sawyer

WASHINGTON — At a special facility in Moscow, a dozen healthy volunteers have just completed one year of lying down — and in fact living — in bed at a 6-degree, head-down slant. In the United States and France, other groups of volunteers have endured the same conditions for much shorter periods, ranging from a week to three or four months. These volunteers are guinea pigs in a most difficult, and increasingly crucial, area of space research: How do people stay healthy and able to function for long periods in the unnatural weightless environment of space? The search for answers to this question is intensifying, spurred by increased international interest in a manned mission to Mars, a voyage that will require humans to function in space for eight months in transit each way and, between, on the surface of Mars. Soviet officials have indicated that they intend to carry out such a mission early in the next century. In the United States, the independent National Commission on Space has recommended a manned Mars flight by the year 2015 and the government, although uncommitted, has stepped up its research.

"And the key thing is that we do not know the extent to which these changes will continue to progress over longer and longer periods of weightlessness." Reproducing the effects of weightlessness on the ground is difficult, he said. "The only effective way we have of doing so for long periods is to put people in the horizontal position." Researchers around the world have adopted the 6-degree, head-down slant as the best way to simulate many of the effects of weightlessness on the body, he said. The position is maintained using methods developed for chronically ill hospital patients, with the aid of a nursing staff. Volunteers are allowed to prop themselves up on one elbow to eat. They shower in a bed using hand-held nozzles, and they use bedpans. Mr. Billingham said, if they exercise, they do pushing or bicycling workouts in the prone position. Ames has conducted studies of up to a month, he said, and a bed rest program at NASA's Johnson Space Center in Houston

Continued on page 11

To Our Readers

WITH this first issue of Technology Quarterly, the International Herald Tribune expands its coverage of the world of high technology. Four times a year, in June, September, December and March, Technology Quarterly will report on research, trends and developments — from home electronics to robotics, exotic new materials and beyond. In this issue, we explore man's (and woman's) ability to adapt to technology, at home, in the workplace and on the way to Mars. On Sept. 22: The next issue of Technology Quarterly will report on integrated systems for global manufacturing, computer applications in the art world, the new car models and more.

The electronic factory: teaching machines to like one another.

Innovative technology from AEG. Here's more:



We currently have, under test, an automatic speech recognition system which will turn computers into "listeners" as well as "thinkers". Future generations of computers will take direction from the human voice, not the keyboard. The result? Simplified interaction between human and machine, and expansion of computer applications.

AEG has already brought to market stoves which "cook cold". These technological wonders are induction stoves which collect heat in the pot rather than the cooking surface. The stove turns itself off when the pot is removed or emptied. The result? Greater safety and appreciable energy savings.

AEG software engineers have developed a CAD (computer aided design) software package that itself is capable of designing the circuitry and wiring plans for a huge factory. This unique program can do little jobs, too. Speed and accuracy in this type of work means big savings.

Electronic intelligence from AEG lets various machines in a manufacturing plant actually communicate with one another. We call it "flexible automation." And, just as with people, machines working together mean increased production, lower energy costs and improved quality. And the real people get to take up more challenging jobs.

AEG

Technology Essay

As the Dream Machines Arrive, the Neural Nightmares Get Worse

Continued from page 9

"Some experiences are bumped out of the storage line. Some just remain because they are important and stressful, but they remain in an incomplete mode of processing," he added.

In time, he said, "people have larger and larger loads of unfinished business. When this gets too great, it begins to affect their subjective experience, interrupting concentration with intrusive images, their sleep with anxious wakefulness or troubled dreams, and their capacity to love and enjoy experience with an impatient restlessness to go on superficially to still the next thing."

We can't even cool down with our so-called leisure time consumables, since managing today's mega-tech chattels is itself a full-time job. Want music? You'll have to brave a multimodal stack of controls resembling the command deck at a nuclear power station — and understand scanning FM multiplexers, CD laser-readers, Dolby damping filters, super-tweeters and subwoofers.

Video? A living hell. The single most prevalent neurosis in middle-class life is "hook-up hysteria" caused by VCR machines: Everybody buys one, but nobody can install them. We use computerized hydraulic exercise ma-

chines that look like something out of Torquemada's back room; a Krups coffeemaker has a timer program you could use to run a NASA launch. In fact, the superfluity of choices is itself a major source of anxiety. Your ordinary clothes washer has several dozen option combinations; cable TV carries 72 channels; and by the time you've set the controls on that "relaxing" white-noise generator, you're too frenzied to listen.

Worse yet, devices that were once largely self-explanatory are now impenetrably baffling. Car dashboards look like an aerial view of Las Vegas at night. And woe to the yeoman who opens the hood. Gone is the familiar air cleaner, the venerable carburetor itself — replaced by a hydraulic-demonic tangle of injector hoses and turbo-tech that only an abdominal surgeon could love. Ditto for so many of the intuitively comprehensible gizmos of yesteryear.

"Any child of 50 years ago," writes Bernard Dixon, a microbiologist, in the journal of the New York Academy of Sciences, "looking inside a household clock, with its escapement and weights or spring, could see in a few minutes how it worked. A child of today peering at a digital watch can learn nothing." Consequently, he warns, we are developing a "black box" mentality — "an unease born of

the suspicion that events have actually moved beyond our power to affect or even to comprehend."

Nowhere is this more evident than in the very real neurophysiological strains of the modern workplace.

Several years ago, the National Institute for Occupational Safety and Health began to include psychological disorders on its list of leading work-related illnesses and has set a high priority on stress-reduction in U.S. offices. Among the top debilitators are clerical work involving computers and video display terminals (VDTs), which, the institute found, produced a higher level of tension than air traffic control.

A new study from IBM's Watson Research Center shows that people still read faster and more accurately from paper than they can from virtually all computer monitors now in use. To achieve equal performance, IBM's research shows, users need CRTs with roughly twice the resolution now generally available.

But don't count on a new screen this year. Even at user-friendly AT&T, a company consultant conceded at a recent symposium, "it is difficult — often impossible — to reverse prior [production] decisions on the basis of human factors considerations."

Meanwhile, modular office designs and pri-

vacy panels cut employees off from wholesome social byplay, and because the technology favors discrete-task equipment run by specialists, workers get less variety and more machine-paced repetition. Thus, writes Philip Kraft in Computerworld, the "office of the future is no more than an attempt to make the office of the present look like the factory of the past."

WHERE that not enough, the beleaguered document-jockey is now beset by the most relentless surveillance in the history of corporate snooper. Thanks to cybernetic oversight, management can easily meter the precise number of minutes an employee works, tally breaks down to the millisecond, count outgoing phone calls and obtain an immediate readout of a worker's productivity compared to that of his colleagues.

Word-processing software can monitor how many keystrokes an operator expends on a given document and track the amount of time spent on revision. And several U.S. companies are now using programs that display selected messages on workers' computer screens, from pop-up "flash card" reminders to flickering subliminal suggestions that last only 1/100th of a second.

It is no surprise, then, that in the United

States workers' compensation claims based on job stress have more than doubled since 1980 and now account for about 15 percent of all occupational disease claims. A 1985 University of Georgia study of workers in 18 public and private sector organizations found that 45 percent suffered from some form of psychological burnout.

Recent surveys by the National Association of Manufacturers indicated that the highest stress ratings derived from lack of appreciation, job instability, social isolation at work and ambiguous job descriptions.

All this at a time when more is being asked of workers every year. "The more sophisticated we make our factories," said John Clancy, a president of McDonnell Douglas Manufacturing Systems Co., "the more dependent we become on the sophistication of people who run them."

Too bad. When it comes to scientific literacy, the average American ranks only slightly above gerbils. In a national survey conducted in late 1985, the National Science Foundation discovered that just 31 percent of U.S. adults comprehend radiation, 24 percent understand what software is and barely 20 percent think they know how a telephone operates. But don't count on it.

The study also found that 40 percent believe

alien spaceships have visited Earth and that there are such things as lucky numbers. The ratings are still lower for those aged 18 to 24, on whom the future of the U.S. economy will depend.

If the techno-spoor doesn't change, perhaps we will. Since World War II, reports the February issue of the Human Factors Society Bulletin, "research literature has shown that, as time, research literature has shown that, as time, people's conceptual complexity increases, they become less authoritarian, more open-minded, have less need for structure and rigid rules, have greater tolerance for ambiguity and become more effective group problem solvers and decision-makers. This tends to be reflected in a dynamic, rather than static, view of the world, in more openness to change, and in a different set of attitudes towards work and organizational structures."

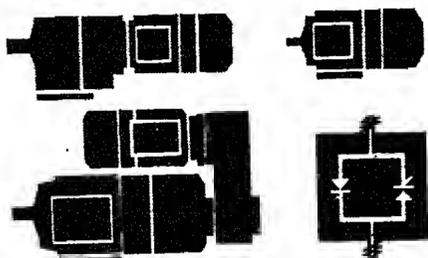
We'll need it. After three years of study, Active Office Systems, a U.S. research firm, has determined that workers are most productive, healthy and alert if they do their VDT work while walking on an electric treadmill. Whether the idea takes off remains to be seen. But it's a metaphor for our time.

CURT SUPLEE is an editor for the Outlook section of The Washington Post.

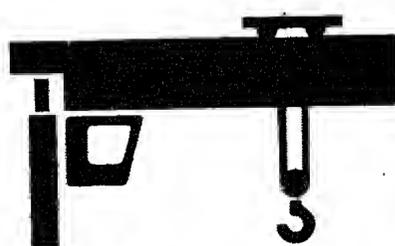
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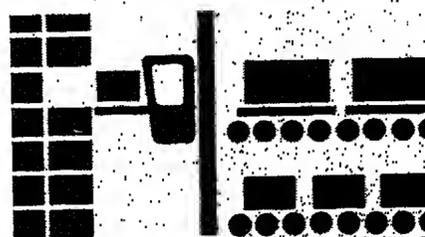
Machinery, Plant, and Systems



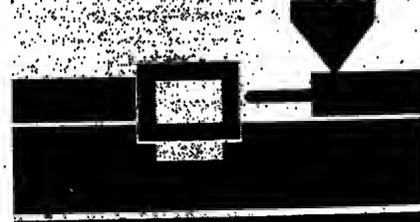
Material handling components
Electric motors, control systems, hoists and travel units, control pendants, busbar lines



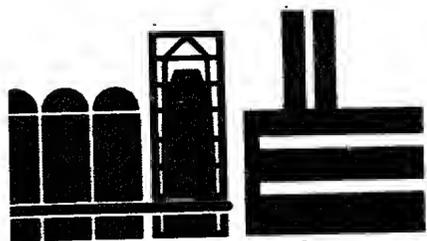
Cranes and handling equipment
Cranes, load handling attachments, storage and retrieval machines, handling systems, controls



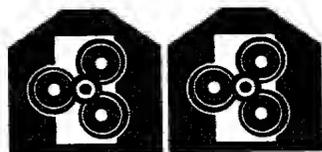
Systems engineering
Storage, order-picking and material transport systems, planning and implementation of integrated material handling installations



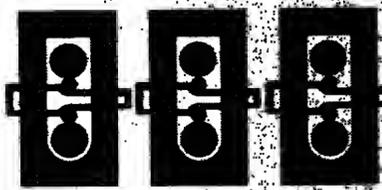
Plastics machinery
Machines and integrated injection moulding systems



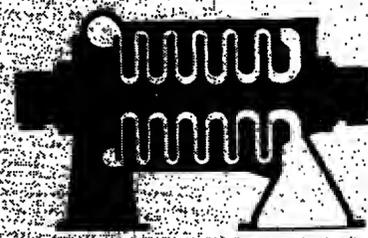
Metallurgical plant and equipment
Integrated works, blast furnaces, steel-making shops, secondary steel-making equipment, continuous steel casting machines, electrometallurgical facilities



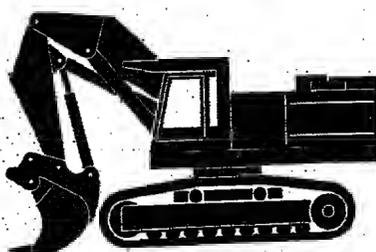
Tube and pipemaking facilities
Plant and machinery for the production of seamless and welded tubes and pipes and hydraulic presses



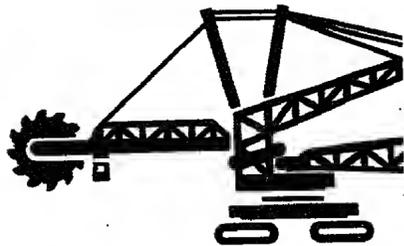
Rolling mill engineering
Rolling mills for sections, beams, rod, strip, plate and sheet, and strip processing lines



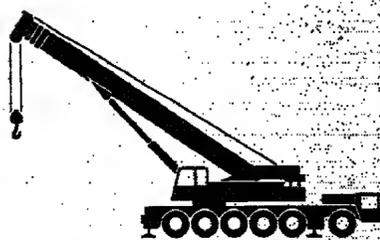
Process gas compressors
Dynamic or positive displacement machines for air or industrial gas compression, and vacuum pumps



Construction equipment
Hydraulic excavators, cable-operated hydraulic excavators, pavers, side finishers



Mining engineering
Open-cast mining equipment, bulk handling equipment, large hydraulic excavators, tunnel-heading and shaft drilling machines, shaft winding systems



Mobile cranes
Lattice-boom and telescopic cranes, pneumatic tyre- or crawler-mounted, harbour cranes, industrial yard cranes



Pneumatic equipment
Compressors, equipment and components for the construction and manufacturing industries

NOTE: B...
The Loewy...
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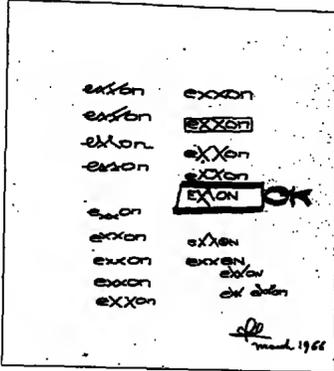
Technology Research

NOTEBOOK

The Loewy Look

Technology in the post-war era inevitably carries the stamp of Raymond Loewy, the late designer who changed the face of products from Coca-Cola dispensers and toasters to television sets and cars and set the pace for industrial design from the '30s onward. On Saturday and Sunday, more than 300 of Loewy's drawings, watercolors, projects, models and manuscripts were sold to the highest bidder at an auction in Rambouillet, France.

A signed gouache of Air Force One, designed in collaboration with President John F. Kennedy, brought \$1,000 francs, the highest price at the auction. A sheet of eighteen felt-tipped doodles that resulted in the Exxon logo sold for 3,500 francs. (IHT)



Networking Fees

The Federal Communications Commission is proposing that companies offering online data-transmission services through local telephone loops in the United States — for example, CompuServe, The Source, Quantum-Link, Telenet and Tymnet — should pay a special "access fee" to hook up to the phone network. These access charges could run to \$5 an hour per user.

The commission makes voice-communications companies such as MCI and Sprint pay an access fee to hook up to local phone lines. Data-communications companies had thus far been exempt from such charges.

"The FCC believes that everybody who uses a local exchange for interstate service should help pay for it with an access charge," said Ruth Milkman of the FCC. "Everybody who uses the network should have to pay."

The proposal, which may become law next year, exempts the largest private data networks, those run by companies such as Ford Motor and Boeing Aerospace. Though these networks are ostensibly private, they are often linked to local telephone loops through the company's switchboards. (WP)

Airless Spare

For a motorist with a flat tire, few experiences are as dismaying as the discovery of a deflated spare. Enter researchers at the Uniroyal Goodrich Tire Co. who are developing what they believe is a workable airless spare.

The new Uniroyal Goodrich spare tire is made of polyurethane, a synthetic rubber polymer used as foam in mattresses and in more rigid forms as automobile bumpers and skateboards. Unlike conventional rubber spare tires, the polyurethane tire is non-pneumatic — that is, it is not filled with compressed air.

General Motors hopes to include them as standard equipment in all new cars as soon as approval is granted by the National Highway Traffic Safety Administration, perhaps in a couple of years. (NYT)

New Ventures

In venture capital circles, recent breakthroughs in the esoteric field of superconductivity are sparking visions of new riches.

At least one new company has already been formed. Tentatively named the American Superconducting Corp., it will use seed money provided by American Research and Development of Boston and of Rothchild Ventures Inc. of New York, two leading venture capital firms, to take the first steps toward developing a business based on the work of Gregory J. Yurk and John Vander Sande, two professors at the Massachusetts Institute of Technology.

They disclosed at a congressional hearing last week that they had developed a method to make the new superconductors out of metal, which would make them far easier to manufacture than the brittle, ceramic-based materials developed by other researchers. (NYT)



Biometric Technologies' neuromagnetometer uses superconducting materials.

Paris to Tokyo in three hours? More than fantasy, the hypersonic jet is approaching reality.

Visions of Soaring at Mach 5

By Axel Krause

PARIS — The year is 2015. About 150 passengers have just been escorted past advanced Airbus, Boeing and Concorde aircraft at Charles de Gaulle Airport. Somewhat apprehensively, they file into a gleaming, snout-nosed, delta-wing plane now ready for the three-hour flight to Tokyo.

Shortly after takeoff, riveted to their seats, passengers are told that the world's first hypersonic plane is cruising — actually orbiting — at an altitude of 18.5 miles (30 kilometers) at nearly seven times the speed of sound. Later, slightly groggy, they step off the plane in Tokyo, carefully avoiding contact with the fuselage, whose temperature is still at about 300 degrees centigrade (532 degrees Fahrenheit). Some passengers say they are looking forward to the return flight to Paris later in the day.

Such a scenario, once a matter of dreams and sketches, is approaching reality. In the United States, Britain, West Germany, France and the Soviet Union, teams of engineers are working in secrecy to develop technology for hypersonic passenger planes, including advanced engines, fuel, materials and communications. Senior executives of leading plane manufacturers and Western governments are, meanwhile, debating trans-Atlantic cooperation as a way of financing.

The hypersonic aircraft was the center of guarded talk at last week's Paris air show, where brief, broad descriptions of projects were readily available at the stands of the main players. These include: Aerospatiale of France, British Aerospace PLC, Messerschmitt-Bolkow-Blohm, or MBB, of West Germany, Boeing, McDonnell Douglas, Lockheed and Rockwell International of the United States.

Even at today's prices, the costs sound exorbitant. For example, airline analysts estimate a round-trip ticket would have to be set at a rate more than double the price of a seat on the Paris-New York Air France Concorde, currently 27,180 francs (\$4,510).

Development costs of a hypersonic plane would easily reach about \$20 billion, according to U.S. companies. But hints of answers are beginning to surface on this score as well. Lou Harrington, a senior vice president at McDonnell Douglas, says he hopes his company could cooperate with Boeing, Airbus Industrie of Western Europe and smaller manufacturers like Fokker NV of the Netherlands to develop the aircraft.

Future trans-Atlantic cooperation was strongly endorsed by ministers from Britain, France, West Germany and Spain at the air show. The U.S. government has not yet taken a position on such cooperation.

"There is a market, limited perhaps, but it's there," commented Alan R. Hughes, a marketing vice president for British Aerospace. "Regardless how I fly to Sydney from New York or Washington today, the trip is 24 hours. If a hypersonic gets me there in two hours for an urgent business appointment, that would make sense, because time matters."

But so does technology — both civilian and military — which most industrial and government planners view as the immediate and most difficult hurdle when assessing its components. These include the following:

• **Engines.** Currently, the world's fastest aircraft, the Concorde, the West European Tornado fighter and Lockheed's Blackbird reconnaissance plane, cannot exceed Mach 3, or three times the speed of sound. Engine makers are pursuing solutions that would permit speeds of up to Mach 25. Most generally agree with the approach of General Electric of the United States, which would combine turbofan and so-called ramjet technology. GE is also working closely with France's

state-owned Snecma exploring other possibilities, such as combining the use of hybrid turbo-ramjets, ramjet-rockets and turbo-ramjet rockets.

Ramjet engines, which were first tested for the German Luftwaffe near the end of World War II, contain no moving parts and would be used once the aircraft attains Mach 3, based on the following principle: Air for oxidizing the fuel is continuously compressed by being rammed into the inlet by the high speed of the aircraft. High-bypass turbofan engines, resembling current models, would be used to generate power that did not conflict with noise and pollution requirements up to about Mach 2.

While cruising, a transition period would last up to Mach 3, according to scenarios of Aerospatiale and MBB. Then, the turbofans would be shut down, as the ramjets powered the plane to higher speeds, possibly with the help of rockets.

The West German Ministry of Research and Technology and the European Space Agency recently commissioned MBB to pursue propulsion technology based on the so-called Sanger project, a proposed two-stage space aircraft. This was the work of a German designer, Eugen Sanger, who developed the idea for a rocket-propelled aerospace plane in the early 1940s. According to MBB, its version could carry about 250 passengers at speeds of about Mach 5 with a range of about 13,000 kilometers.

Meanwhile, British Aerospace has begun testing a model of an engine designed for its proposed Hotol spaceplane, a reusable shuttle transport that would attain speeds of up to Mach 5. First versions of the Hotol would be used as early as the late 1990s for space missions, but later, they might be developed for commercial transport. A goal in the recent testing was evaluating re-entry heating and pressures, according to company sources at the air show.

• **Materials.** To withstand the projected speeds and surface temperatures, expected to range between 80 degrees centigrade (176 degrees Fahrenheit) and 600 degrees centigrade (1,120 degrees Fahrenheit) initially, new metals and plastics will be needed.

But companies and government research agencies involved in developing materials have been extremely guarded in providing detailed information.

New forms of titanium, stainless steel, polymers and metals reinforced with ceramics, boron or carbon threads may also be incorporated in the new aircraft. Novel alloys and other ceramic materials are being studied for the engines, turbines and combustion chambers, where temperatures will easily reach 1,400 degrees centigrade (2,544 degrees Fahrenheit).

• **Communications.** This is probably the most guarded area of technology being studied, and apparently, the least advanced. Most development work in this area has been done in the United States, primarily on the shuttle program. Britain and France are studying avionics technology in connection with their respective Hotol and Hermes shuttle projects.

Probably nowhere is the work on a hypersonic plane more advanced than in the United States. Known as the National Aerospace Plane and financed jointly by the National Aeronautics and Space Administration and the Defense Department, the plane's engines are already being developed by GE and Pratt & Whitney, with projected speeds of up to Mach 25.

Boeing, General Dynamics, Lockheed, McDonnell Douglas and Rockwell have started airframe studies, and contracts for the first flight demonstration aircraft may be ready to sign at the next Paris air show in 1989.

AXEL KRAUSE is the economics correspondent of the International Herald Tribune.

Preparing For Mars

Continued from page 9

has done studies lasting three or four months. U.S. studies in the past have reflected the fact that shuttle flights are limited to seven to 10 days. But with the advent of the proposed space station, where crews will stay aloft longer, and also with increasing interest in manned planetary exploration, he said, "that approach is now changing" in favor of longer term studies similar to those of the Soviets.

The more costly alternative research method is, of course, to put people into space. Here, too, the Soviets have pioneered. Since 1961, they have progressed from two hours in space to an eight-month sojourn.

The two-man crew aboard the Soviet space station Mir is now in the midst of a 10-month tour of duty which is expected to become routine for Mir crews. Also, two cosmonauts are the only humans who have repeated long-duration flights: they made two such flights each and one, Yuri Romanenko, is now aboard Mir for a third.

"The organism 'remembers' weightlessness and during repeat missions adaptation proceeds less painfully," said Tamara Breus, of the Institute of Space Research of the Soviet Academy of Sciences in Moscow. Mr. Romanenko has reported having a much easier time adapting to weightlessness than his less experienced crewmate, she said.

The longest any American astronaut has spent in space is just under three months (84 days) on the last Skylab mission in 1973-1974. No women have flown for more than 10 days.

"The data the Soviets are accumulating is very, very valuable data. Nobody else is doing it," said Dr. Arnold E. Nicogossian, director of life sciences for NASA, in Washington.

There is a limited flow of information from the Soviet program. American researchers say, "We talk with them, scientist to scientist. We understand what problems they're studying. We get certain publications," said Dr. Nicogossian. "But to have a working relationship where you can comb through their data, ask the questions, it doesn't happen."

The purpose of the research is to develop countermeasures, such as diets, exercise, fluid-loading, gravity suits and the like, that make it possible for space flyers to stay healthy and keep functioning, both while they are in space and when they return to gravity.

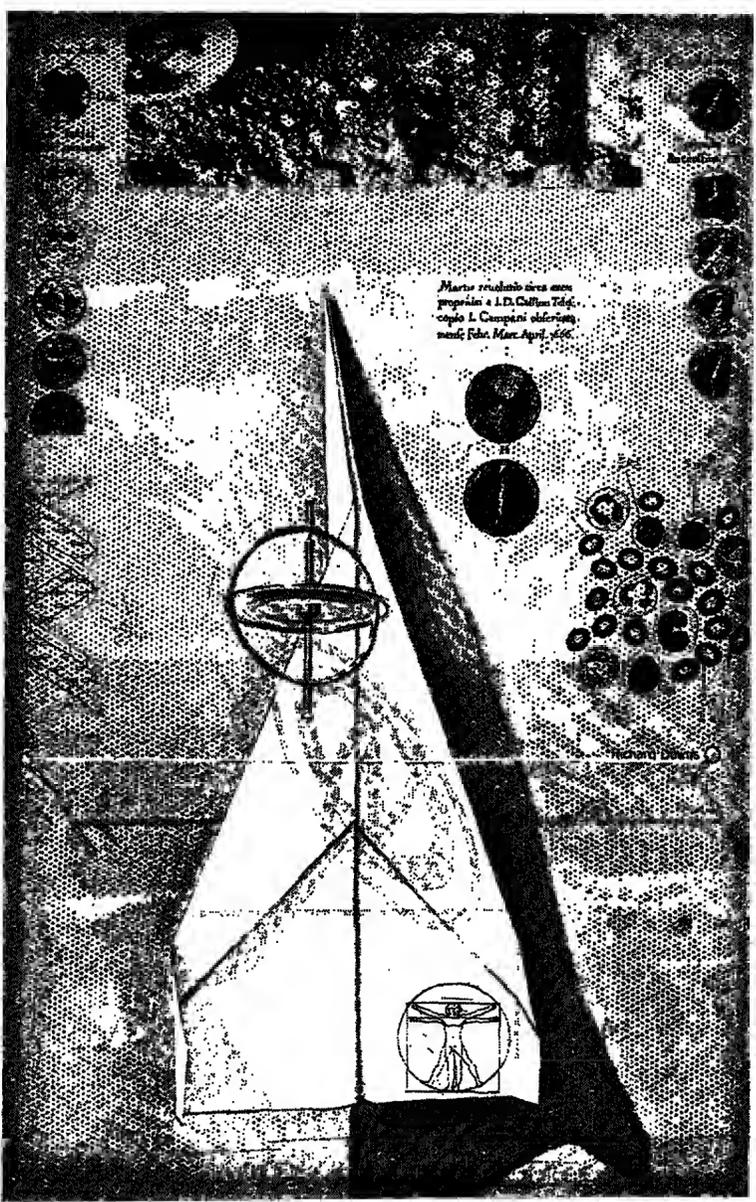
To counteract the muscle deterioration, for example, the Soviets require that their Mir cosmonauts exercise on a treadmill for at least two hours a day, an undertaking that reportedly generates a shroud of sweat.

"It's very uncomfortable" said John Charles, of Johnson Space Center's Space Biomedical Research Institute in Houston. The flyer has to harness himself to the machine to keep from floating off, he said, and the harness creates painful pressure points.

Skeptics within the research community maintain that cosmonauts comply with the exercise mandate "religiously" as long as they are within camera range" of ground controllers, and then skip the rest, Mr. Charles said. "At least, so the story goes."

NASA, with its short-term manned flights, has no such requirements. Shuttle astronauts "usually exercise for about 10 minutes at a time, once or twice during a flight" to test muscles before landing or as recreation, he said.

As for the loss of bone minerals, that presents a serious short-term problem in addition to its effects on bones themselves. "That calcium ends up in your blood and increases the potential for kidney stones, and this could happen



Mars resembles a red planet, a J.D. Callahan told... photo L. Caspary electronic... mens Feb. Marc April, 1987

Psychology Is Key on Long Flights

By Brigid Phillips

PARIS — To most mortals, the limits of space are as short as the imagination. To Patrick Baudry, a French astronaut, the concept of conquering space is as long as several millennia and defined only by the limits of the human mind.

Mr. Baudry speaks with the wisdom and enthusiasm of one of few humans to experience life in space. He has the objectivity of one who has worked with U.S. and Soviet space officials to expand the horizons of space.

For Mr. Baudry, the physical and technical obstacles associated with space travel are surmountable. Excellent physical condition is assumed. The astronaut learns the technicalities of how to conduct scientific experiments in space or the operations of the spacecraft by himself or with a scientist. But psychological constraints make for problems now and will only be multiplied for long manned space flights. Already, in both the Soviet and American programs, he said, training is a much lower priority for astronauts than mental preparation.

"The critical part comes when you start working together in the simulator," he said. In Moscow, that phase starts a year before liftoff. In the United States, the National Aeronautics and Space Administration requires three to six months in the simulator.

"You have to learn to know experiments or how to motivate others," Mr. Baudry continued. "Up there in that tiny area of the capsule, it is crucial to understand perfectly the personalities of the other team members."

When it comes to considering astronaut psychology, Mr. Baudry rated the Soviets far ahead. From 1980, he spent two years at the City of the Stars base near Moscow, training for a June 1982 space flight, for which he eventually was named an alternate.

Each member of the team went through the same program of in-depth training that covered every task on board, from conducting experiments to operating the Soyuz-7 craft.

"I got training as a full-fledged member of the crew. Each crew member was interchangeable with the others. My training was extremely thorough and serious, and exactly the same as the Soviet cosmonauts got," Mr. Baudry said.

In 1985, he went through the equivalent American preparation and made a weeklong flight on the space shuttle Discovery, though there, he was treated as a lesser team member.

"Psychologically, it is more difficult in the American program," Mr. Baudry said. But he pointed out that NASA also has a much more rigorous and regular program of space flights. "The Americans have a real need for terribly tight organization that demands specialization. It is perfectly logical that they would categorize people. But that shouldn't be allowed to affect the psychology of the astronaut involved."

UNLIKE the Soviet program, U.S. space development is tied to commercial interests. "There is a pioneering spirit. The Americans know how to invest and how to take risks," he said. "The Soviets have little of that spirit of hreaking away and battling for the lead."

But, Mr. Baudry found, the Soviets take a much more philosophical, visionary approach to space. "They have a view of their space program that is very long-term and consistent. The American program revolves around developments in the next few years with little of that futurist vision."

Mr. Baudry, 41, has put aside his career as a French Air Force test pilot. His "greatest letdown" was having to land on Earth after eight days in space aboard the Discovery, but he has no immediate plans for more space travel while he works on the development of Europe's space shuttle, Hermes. Yet his perspective, like that of the Soviets, is long-term.

"What will be achieved by 1989 does not interest me. Even 25 years is not as much as half a second in the scheme of things. What is important is to look across millennia," he said. "What will become of man on the planet Earth in the year 3000, 4000, 5000? Will this being that has created the power to destroy his planet have the wisdom to survive? And will we succeed in going beyond our solar system? These are the real questions of our adventure. My interest is in being a small part of the motor that drives the machine in the direction of a natural, logical and positive evolution."

KATHY SAWYER is the space writer for The Washington Post.

BRIGID PHILLIPS is a journalist based in Paris.

Technology Developments

Sale Furor Spotlights Submarines

By Malcolm W. Browne

NEW YORK — As the Soviet Union and the United States race to build the quietest submarines possible, the recent disclosure that a Japanese company sold robot propeller-manufacturing machinery to Moscow has underscored the growing importance of computer control to the weapons industry.

In a thermonuclear war, detection of the telltale noise produced by the propeller of a single lurking missile submarine could prevent the destruction of scores of cities. The sale by the Toshiba Machine Company to Moscow of computer-controlled machinery capable of making especially quiet propellers has, therefore, caused consternation among American military officials and has helped to sour Japanese-American relations.

Details of the technology required for making quiet submarine propellers are among the most highly classified of Defense Department secrets, and a Navy spokesman said Defense Department officials were barred from discussing the subject.

However, an enormous amount of information about screw propellers is in the public domain. In interviews, several marine propeller experts and former submarine officers discussed unclassified aspects of the quiet propeller problem on condition that their identities be withheld.

"It's a safe bet that the Russians have had a good grasp of the principles behind quiet propellers all along," a former commander of a ballistic-missile submarine said, "and they also probably had ways of getting the machinery they needed without help from Toshiba. Where they've lagged has been in the computer programming and software needed to drive these numerically controlled machines."

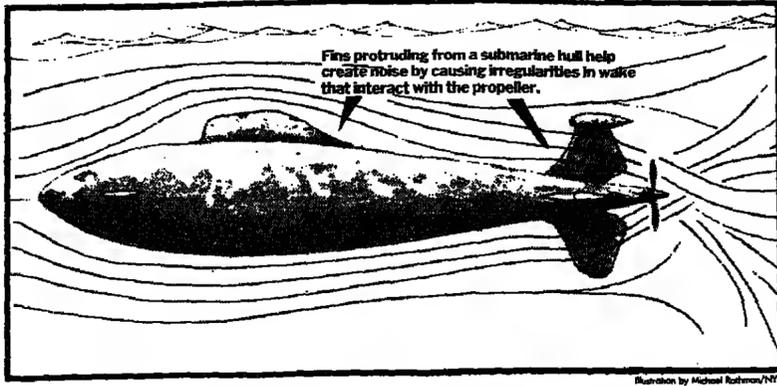
Most of the surface ships in the United States Navy are driven by complex, controllable-pitch propellers manufactured by the Bird-Johnson Co. using such equipment.

A numerically controlled milling machine is one in which a digital computer, programmed to direct a complex series of mechanical steps, sends numerical coordinates directing the machine's milling head along the paths it must take to remove the required amount of metal from the object it is shaping.

One of the main sources of submarine noise, experts say, is propeller cavitation. A spinning propeller blade cuts through water in much the way an airplane wing does through air. The front surface of the propeller blade, comparable to the upper surface of a wing, creates suction as it speeds through the water, and the suction pulls the propeller (and ship) forward. But above a certain speed, the blade moves too fast for the water touching its front face to catch up, and this creates a vacuum cavity, which may extend in a sheet along most of the blade's surface.

As the cavity sheet separates from the blade, it breaks up into microscopic bubbles that are ordinarily swept away with the flow of water. When the bubbles reach a distance from the blade, where the surrounding water pressure increases to its normal level, the bubbles abruptly collapse. Each collapse makes a small but sharp noise, and the collective effect of these cavitation claps is a continuous roar audible to enemy sonar detectors.

The roar itself is not the only source of propeller noise. Each of the objects that stick out from a submarine's hull — the sail (superstructure), stabilizing fins, rudder and so forth — creates a turbulent wake distinct from the rest of the water streaming past the vessel. When a propeller blade cuts through one of these



Fins protruding from a submarine hull help create noise by causing irregularities in wake that interact with the propeller.

turbulent discontinuities in the flow of water, a pulse of sound results: the principle is similar to a jet of air blown through the spinning holes of the disk in a siren. The more blades the propeller has and the faster it is spinning, the higher will be the pitch of the resulting noise.

All propellers cavitate above a maximum speed. Even below this speed, the blade tips, which are moving through water faster than blade roots, may cavitate. A submarine heeled across a wide stretch of ocean to its station ordinarily moves at high speed ("transit speed") until it occurs its destination, and during this period its propeller cavitation is particularly noisy. Once on station, the submarine slows to a crawl ("patrol speed") to remain as quiet as possible. But even when a submarine is forced to travel comparatively rapidly, the captain tries to keep cavitation and other noises to a minimum.

"Obviously, the prudent submarine commander who must increase speed will take what steps he can to prevent cavitation noise," a former submarine officer said. "One way is to dive as deep as he can."

The onset of cavitation is determined partly by the pressure of water enveloping the spinning blade. The higher the pressure, the faster the blade can spin without tearing loose from the water in contact with it. Since water pressure increases rapidly with depth, a submarine can travel faster while remaining quiet if it dives deeply.

The design of the propeller also critically affects the spinning speed at which cavitation sets in. A large-diameter propeller that spins slowly is less prone to cavitation than a small one that spins rapidly, and modern submarine propellers are, therefore, relatively large; some Soviet propellers are so large their blades extend above the water when a submarine runs on the surface.

A nuclear submarine propeller, cast from bronze in one piece, generally has five or seven blades, and the number of blades affects its sound. The more blades that pass through a given wake discontinuity in a given time interval, the higher will be the pitch (frequency) of the sound. In general, high-frequency sound does not reach as far under water as does low-frequency sound, so a larger number of propeller blades may help defeat an enemy's acoustic detectors.

A particularly important factor in propeller noise is the shape of the leading edge of a propeller blade. In conventional propellers, the blades are more or less symmetrical, and the leading edge slants all at once into any wake discontinuity it encounters, creating a sharp pulse of sound. But in advanced military propellers, the leading edges of blades are swept back — skewed — in somewhat the way the wings of jet airplanes are swept. Skewed propeller blades slice across wake discontinuities at sharp angles, and the sound they make is therefore smoother and quieter.

Submarine propellers are also "raked," meaning that their blades are angled back from the shaft rather than perpendicular

to it. The blades are thus prevented from encountering some of the wake discontinuities that create sound.

Among the most important ways of increasing the speed at which a propeller may turn without producing cavitation noise is to eliminate irregularities in the smoothness of its curves, and it is for this that advanced robot milling machines like those made by Toshiba are particularly important, experts say. The slightest ridge, dimple or "pillow" on the face of a propeller blade, invisible to the naked eye, may be enough to trigger the separation of the blade surface from the water in which it is spinning and thereby start cavitation.

A bronze submarine propeller, perhaps measuring some 20 feet in diameter and weighing around 10 tons, is first cast from molten metal, cooled, and inspected for faults. It must then be machined to the exact dimensions specified by computer-assisted engineers who designed it. Finally, it must be perfectly balanced (by removing metal from one or more blades) and tested on a spinning shaft for vibration and other characteristics. These operations are so difficult and time-consuming that the cost of a propeller for a large, modern warship, industry officials say, is about \$1 million.

PROPELLERS are traditionally finished by hand. Using template gauges to check their progress, workers grind metal away from each blade a little at a time until the appropriate template fits perfectly. Ten templates, fitted at equal intervals along the length of each blade, must all fit perfectly.

"But if you've ever worked in a machine shop, you can guess the effect of this," an engineer said. "A worker will grind down the blade at a template point to a perfect fit, but in the blade areas between templates he'll tend not to grind too hard, for fear of taking out too much metal. Invariably, this means too much metal is left between measurement points, with a certain amount of bulging or 'pillowing.' A propeller like that will pass all inspections, but it will cavitate at too low a speed."

Other experts said that in any case, Soviet submarines would have become quieter. Submarine noise comes from several sources besides propellers, one source being the vibration of gears, shafts, bearings, pumps and other machinery inside the ship's hull. This kind of noise is customarily reduced by mounting machinery on rubber blocks or otherwise isolating it from the hull. Builders also line hulls with foamed-plastic sound insulation.

"This Toshiba flap is unsettling," a former naval officer said, "but I suspect it's just the latest skirmish in our cat-and-mouse game."

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Degradable Plastic Timed to Self-Destruct

By Thomas Netter

GENEVA — Anyone who remembers seeing "The Graduate" may also remember laughing when the word "plastics" summed up a generation's aversion and contempt for the environment while in pursuit of "durable" security.

But these days, the durability of plastics is no longer a laughing matter. Mountains of synthesized polymer trash are growing. Plastic cups, bottles and picnic cutlery litter beaches and roadsides the world over, resisting degradation by water, rain, air or ultraviolet sunrays and micro-organisms. And burning is no solution: many plastics produce putrid, noxious gases when put to the flame.

Slowly, governments and the public are beginning to say, "enough."

This month, Florence banned the sale of plastic food bags and containers. Italy has decreed that all plastics used for non-durable goods must be made degradable by 1989. And as other areas of Europe, as well as the United States begin to react to the mounting scourge of indestructible plastic litter, the plastics manufacturing industry is stepping up its search for a solution.

"Until now, they usually wanted to stress how long plastics last," says Robert Fresh, an independent public relations consultant in Geneva who specializes in the chemical and plastics industries, "but that may be changing slowly."

Although photo- or bio-degradable plastics have been available for years, mass marketing has been slow and hampered by drawbacks. About 25 percent of the six-top plastic beer cans now sold in the United States are photo-degradable, industry sources say. And each month, a Toronto firm called Ecoplastics, sells about 20 tons of a product called Ecolyte that breaks down in ultra-violet light so micro-organisms can do their work.

But many of these products have disadvantages. Ecolyte, for example, must be kept indoors to maintain shelf life, while other products such as Plastor developed by a company in Israel are unsuitable for food packages because additives used in manufacturing could spoil food. Companies in Britain and North America are producing degradable plastics that can be destroyed by bacteria or micro-organisms. But in many cases, cost is a negating factor.

One of the more promising developments is about to get full public display in Switzerland. A company formed in 1983, Belland AG, is to formally unveil its new degradable product next month.

Reinhold Belland, the president and majority owner of Belland has invented a plastic product that can be dissolved when sprayed with water mixed with a chemical reagent tailored to specific applications and the uses expected from the material, according to Roman E. Kainz, vice president for corporate develop-

ment in the company's headquarters at Solothurn, Switzerland.

Mr. Kainz says the new product can be used for almost every plastic application — injection moulding, profiles, foam, liquid plastic or rigid plastic — "everything you can imagine in thermoplast applications can be made out of Belland plastic."

Mr. Kainz said in an interview that Belland can develop a polymer for an individual client's needs. The plastic is then manufactured through a standard process that is licensed out to manufacturers. Belland does not produce the product itself, Mr. Kainz said. The company has only 60 employees, two-thirds working at Belland's research and development facility in the tiny village of Biberist near Solothurn.

Chemical agents can break down the material in seconds, hours, days or months.

The beauty of Belland plastic, Mr. Kainz says, is that it can be made stable against water, can have a long shelf life, or be used as agricultural film that is exposed to sun, light, water and micro-organisms.

"After the resistant period, you can define the time when it degrades," Mr. Kainz says. "And even this can be installed into the plastic, from seconds, to minutes, hours, days, or months."

The plastic can be programmed, either chemically by adding time reactive agents, or by producing it in such a way that exposure to water or a chemical agent, for example, would begin to break it down.

After the plastic is dissolved, it is broken down in an "environmentally safe" process of biological degradation. A one-year study indicates a 50-percent biological breakdown, and Belland assumes that within two years all residues will disappear. "What we know in using raw materials already tested is that there are no bad effects on the environment, humans, soils, or the air," Mr. Kainz says.

THOMAS NETTER is a journalist based in Geneva.

W. Germans Test Digital System

The underlying question: Will people really use the technology?

By Douglas Sutton

HANOVER — The future of telecommunications in West Germany for the moment belongs to around 800 individuals in Mannheim and Stuttgart, in a pilot test that industry executives are confident is the start of a thorough reworking of the telecommunications landscape which will go far beyond West Germany's borders.

The testing, begun in January under the auspices of the West German Federal Post Office, covers two systems for the Integrates Services Digital Network, or ISDN, which combines the complex — multiple telecom services running simultaneously — with the simple: all via conventional telephone lines.

For the moment, two companies in particular are awaiting the Bundespost's extremely critical evaluation. They are Siemens with its Electronic Digital Switching System or EWSD used in Mannheim, and Standard Elektrik Lorenz (SEL), whose System-12 was put through its paces in Stuttgart.

But other West German firms, such as Telecommunications, ANT, DEW, and Nisidor, as well as foreign companies will be watching the Bundespost's appraisal. It is not just a question of the billions of dollars' worth of research and development costs already invested, but also on the line are the strategies that telecom firms have begun to draft for ISDN's future.

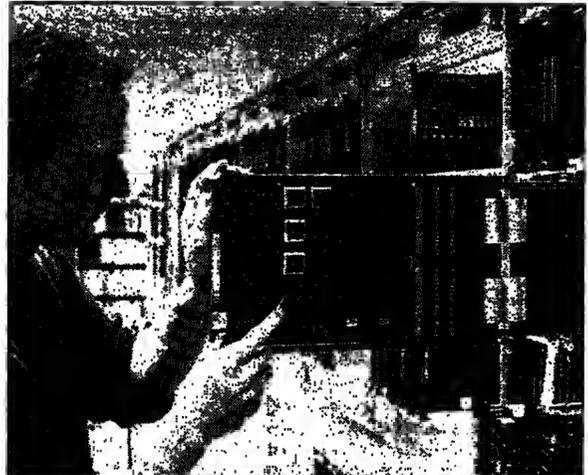
"The chief question in the pilot testing concerns is not just the technical side of ISDN. Everybody agrees digital communications is the technology of the future," said Rainer Mueller, a Siemens engineer and marketing manager. "What is also at stake is the question of user acceptance. Will the businessman and private household really use the multiple services offered under ISDN? This is, after all, the real test."

Industry officials agree that the question is one of educating the public, particularly the private householder, who might not immediately know what to do with ISDN.

At the office equipment, communications and information technology fair CeBIT in Hanover last March, companies tried to educate potential customers on the uses of 144 kbit/s. This is the sum of two 64-kbit/s channels for the simultaneous transmissions of voice, text, data, and still images, combined with a third 16-kbit/s channel for coordinating and controlling these services.

To its display, Siemens linked a travel bureau, an architect's office, a bank and a private household, all variously equipped with telephone, telefax and telecopier equipment, computer terminals and normal TV sets. It showed them, hypothetically, going about daily business using the gadgetry simultaneously.

In the real-life testing in Mannheim and Stuttgart, the exacting standards of the Bundespost, meanwhile, were the most immediate hurdles. Mr. Mueller said that during the year-long period in which the Siemens and SEL systems were being tested, the post office had



A technician at Standard Elektrik Lorenz laboratories inspects a component of System 12, the digital switching hardware being tested in Stuttgart.

set a limit permitting only a couple of minutes of any kind of disruption in the ISDN services.

West Germany is not alone, of course, in starting to test the ISDN wares. The list of countries launching or planning pilot projects in various forms of digital telecom technology in the near future includes Belgium, France, Ireland, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland, Britain, and the United States.

The West German project is the newest phase in the Bundespost's preparation to introduce glass fiber-based broadband transmission systems starting in the early 1990s.

Beyond this, the West Germans hope to prove that though the applications may be complex, ISDN-compatible systems, at least in terms of the 64-kbit/s channels, would be relatively easy to install as they replace the older analogue switching network.

Theodor Irmer, an engineer at the Geneva-based International Telegraph and Telephone Consultative Committee (CCITT), points out that, given the worldwide acceptance of clearly defined technical standards, ISDN networks could find widespread ready acceptance.

"As paradoxical as it sounds, developing countries which are now just starting to develop their networks could have an extraordinary interest in digital technology," Mr. Irmer told the West German engineering association VDI publication Magazin.

He said that developing countries could sooner apply digital technology over a broader region than could the large industrial nations that were still operating analogue technology.

Siemens believes its EWSD system, which according to Mr. Mueller required about 2 billion Deutsche marks (\$1.1 billion) in research and development costs, has an advantage under the international standards for digital switching networks laid down by the CCITT.

Most recently Siemens concluded a sale of four EWSD units with a total of 43,000 con-

nections to Portugal. So far Siemens has sold its EWSD system to 52 telephone companies in 26 countries, for a total of 6.7 million telephone hookups.

In view of the tremendous up-front development costs companies need such sales to get their money back.

A Siemens executive estimated that the company needed a sales turnover of at least 10 billion Deutsche marks to recoup EWSD research and development costs. A board member, Hans Baur, said that Siemens needs a 15 percent share of the world market to preserve its ability to compete.

With such companies as AT&T, Northern Telecom, Japan's NEC, and Ericsson also developing and selling digital switching technology, many firms have begun to ponder whether they might have to join forces to survive. This was one of the chief topics discussed by industry executives at a world telecom symposium during the CeBIT exhibition.

At that forum hosted by the weekly Wirtschaftswoche magazine, Mr. Baur said that there was a distortion of the market stemming from large mergers.

He also said that, while German cartel law restricted firms from gaining too much of a share of the domestic market — Siemens is under fire for its 43-percent share in West Germany — the competition was under no such restriction. He cited as one example Alcatel's 85 percent share of the French telecommunications market.

Still, Mr. Baur was confident about the future prospects opened by the ISDN development. He said the Europeans were now in a position to gain territory worldwide in the telecommunications field, but warned that there would first have to be agreement on unified standards.

DOUGLAS SUTTON is an editor at the German Press Agency (DPA) in Hamburg.

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Technology Workplace

'Networking' From Home

By Sherry Buchanan

LONDON — Technology has freed us from having to work in an office. Yet, most of us still do. Most companies do not want to lose control over their staff or take the trouble to reorganize. And many business transactions require team work.

But experts agree that personal computers and computer links mean that more people in certain types of jobs will be able to work from home and will do so productively. Whether they will want to is another question. Not everybody is cut out to work in quasi-isolation, and people worry about the career implications of being home-bound: Out of sight, out of mind?

According to a survey of experts by the British Department of Trade and Industry, one quarter of the respondents said that by 1995, 10 percent to 15 percent of the British labor force would work from home and that 20 percent would work from home by 2010.

"Office Workstations in the Home" (National Academy Press, USA) looks at six case studies where staff worked from home and argues that there were 20 percent to 50 percent productivity gains.

Some companies such as Blue Cross-Blue Shield, British Telecom, ICL, the British computer group, Rank-Xerox, the European headquarters of the U.S. office equipment company, and F. International Ltd., the British software consultants, are readily encouraging some people to work from home and setting them up with the necessary computer links to communicate with each other and their boss. But, because of the perceived negative career implications, few men still take up the offer. Out of ICL's 280 off-site workers, 93 percent are women. Out of F. International's 1,000 home workers, 97 percent are women. Both companies started letting people work from home before the age of the personal computer to enable women to combine career and family.

ICL tries to recruit more men by offering good promotion possibilities. In ICL's book, being an off-site worker does not mean that you cannot become a manager if you want to. For example, Diana Hill, who started out as a programmer with ICL, now manages 170 off-site workers. Like them, she works from home and they have regular meetings at ICL offices.

Three years ago, Rank-Xerox decided to let a few of their staff members work from home. Senior management devised the project at a time when the company was trying to cut costs. By letting 54 people become "networkers," Rank-Xerox sought to retain people with certain skills but

managed to cut costs by offering them contracts that guaranteed them 100 days worth of work with the company. For the rest of the time, they were on their own.

Part of the Rank-Xerox deal was to lend networkers the computer equipment and software they needed for their specific job.

One networker, David Butler, who was a systems director with the company, started his own company, Artificial Intelligence Ltd., which now has an annual turnover of £2 million (\$3.26 million).

Another worker puts out the in-house magazine from home.

"I wanted to do my own thing: I had done my corporate bit," said Rosemary Vaux, who started working three and a half years ago from her spare bedroom in a cottage in Buckinghamshire. Her company, Ravenstone Public Relations, now handles other corporate accounts, and her husband, who worked as a television broadcasting engineer, has joined the company full time and looks after the production side.

"The technology is the crux: that is what makes it all happen," she said.

Some home-bound workers find it difficult to deal with isolation and loneliness. Others cannot separate home from work and find themselves doing house chores when they should be working. Managers recruiting people to work at home try to be selective.

"Not everybody can work at home, so we spend a lot of time on interviewing," said Diana Hill, general manager of CPS Professional Services, a division of ICL, which produces software packages. "We are looking for self-motivated individuals. We try to find in their background projects they have accomplished on their own."

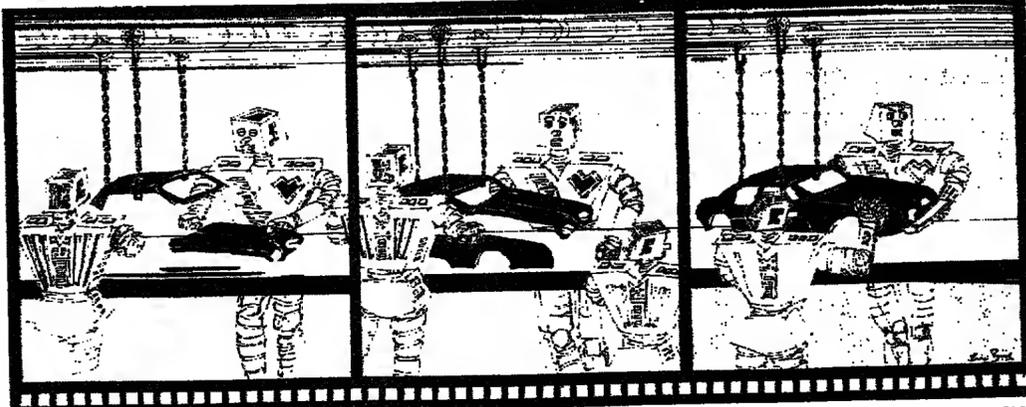
Some women quit because they could not cope with both children and job at home. One CPS bit of advice is to hire help for the children.

For the individualistically minded, working from home can help relations with the boss.

For the boss, on the other hand, it means devising more formal controls and maintaining constant communication.

"We have to get to know our staff very well," said Mrs. Hill. "Without being intrusive, we have to be aware of some of their personal circumstances because they are much more likely to be affected by them."

SHERRY BUCHANAN writes the International Manager column for the International Herald Tribune.



Humanizing Factory of the Future

By Juris Kaza

TROLLHATTAN, Sweden — For Sweden's highly innovative automobile industry, the manufacturing system of the future will be built on a lesson drawn from the past: The human factor is the key to performance.

Anders Svensson, a behavioral scientist working at Saab-Scania's main passenger car assembly plant, said that the most important element in auto production, whether highly automated or not, is a stable base of experienced and motivated employees.

When production technology begins to debumanize or frighten people, it defeats its own purpose.

"You have a lot of high-tech car plants in the world that are not successful," he said. "In the next car plant generation, we will probably take a small step backwards in terms of technology."

Saab's facility at Trollhattan, near Sweden's west coast, is a giant complex producing over 60,000 Saabs a year, or nearly half the company's annual production. It boasts production equipment from Japan, France, West Germany and Sweden, including Asea robots that poke inside car bodies, spot-welding them in bursts of hissing sparks. The robots do work that was once done by human workers. Painting and body-part pressing is also almost wholly automated.

There is no single assembly line in Trollhattan but a series of "minilines" separated by buffer zones, where partly assembled vehicles wait to be passed from one work team to another.

"Carriers" bearing parts or whole subassemblies silently glide along passages between robot lines and work areas to computer-selected destinations. They stop smoothly when one of the soft bumpers detects a human standing in the way.

Trollhattan, and rival Volvo's plants at Kalmar and Torshanda, near Gothenburg, are the state of the art of Sweden's auto industry. But they will not be for long. Both companies are investing billions of kronor in a new generation of assembly plants at Uddevalla for Volvo and at Malmo, on the southern tip of Sweden, for

Saab. These plants are scheduled to be fully operational in the early 1990s.

Both facilities are to be built on the sites of abandoned shipyards, the mute remnants of Sweden's once-powerful shipbuilding industry.

Despite the extensive use of robotics, computer-assisted design and automated process control, the buzz words for future auto production methods in Sweden are "sociotechnology" and "job design," rather than the jargon of computer hardware and high technology.

"There is a widespread misunderstanding about the role of technology in our future factories," said Bert Jonsson, AB Volvo's vice president for human resources.

"There is a part of the manufacturing process that can be automated, such as the pressing of sheet steel, the making of motor blocks, transmissions, as well as painting and body welding. All these can be and all these are automated. But there is a part of production — the final assembly — which no one has automated and which won't be automated in the foreseeable future."

Volvo officials say that the future of the Swedish auto industry depends on innovations in the quality of work rather than the physical and technical processes involved, and their counterparts at Saab agree.

"The 'big bang' of high technology gives you a choice," said Mr. Svensson of Saab. "You can use your people just to load the automated machines, or you can use the operator's intelligence as far as possible. One way is to integrate the tasks around the direct assembly process, such as planning, materials handling and administration."

Saab has evolved an 8- to 10-member team system for its car assembly plants based on job rotation and considerable autonomy by each team in setting routines and objectives. Computerized process control has been decentralized, with each miniline controlled by its own computer, which one or several members of the respective production team are able to maintain and program.

Volvo's innovations in production are synonymous with the plant it opened in 1974 in Kalmar, on the east

coast of Sweden. Kalmar pioneered the use of teams and the breakdown of the assembly line into work areas, with cars moving along on carriers. Because it started its innovations all at once, Kalmar got more international publicity than the evolution of similar methods at Saab.

At their future plants, however, Saab and Volvo will be taking different paths in the development of work environments. Volvo's Uddevalla plant will actually consist of six workshops, each staffed by around 100 workers that will be responsible for the complete assembly of individual cars from start to finish.

EACH shop will also be its own profit center, with workers' compensation packages including some form of incentive for improving productivity. Several teams may work side by side, but each will start with a "kit" of parts and finish its work by driving or rolling away a new car, according to Mr. Jonsson.

Exact plans for the working environment at Uddevalla are incomplete and are being developed by a small-scale experimental workshop near the future site that is training future employees.

Volvo officials say that the Rolls-Royce, widely considered as the world's finest car, is hand assembled, and the new facility at Uddevalla may try to create the atmosphere of a craftsmen's workshop while maintaining the speed and efficiency to produce up to 80,000 cars per year on two shifts.

At Saab, Mr. Svensson indicated that the new Malmo plant will probably run along the same lines — "a matrix of work teams" — as Trollhattan.

The main problem will be to arrange work so as to stimulate, challenge, educate and retain skilled workers, he said. A 10 percent or 12 percent turnover per year, with its loss of skills, can be just as damaging to Saab as a breakdown of a highly complex automated production line.

JURIS KAZA, a journalist based in Stockholm, contributes regularly to the International Herald Tribune.

PS-2 Gets Mixed Review

NEW YORK (NYT) — The executives responsible for buying and maintaining microcomputers for large corporations and government offices are giving the new IBM Personal System 2 computers a mixed review.

International Data Corp., a market research organization based in Framingham, Massachusetts, recently asked 200 management information systems heads to give their opinions of the PS-2 line of computers.

Only 1 percent expressed "unbridled enthusiasm," while 34 percent reported "moderate enthusiasm" and another 34 percent responded that it was "about what I expected."

But 27 percent asked, "Where's the beef?" And 4 percent expressed "disney and/or outrage."



For the manufacture of herbicides we have the best partner of all: mother nature.

BASF
Innovations in chemistry

One of the aims of agrochemical research is to achieve a good action using as little active ingredient as possible.

BASF research workers have succeeded in developing certain phytohormone herbicides which almost halve the amount needed for weed control without any loss in effectiveness.

The key to this success is provided by nature — by natural raw materials and the biotechnological processing of them.

Matze, potatoes and cereals yield glucose, which in turn is converted by lactic acid bacteria into lactic acid.

This is the building block for the specific manufacture of the biologically active component in certain phytohormone herbicides.

This biotechnological stage is followed by the manufacture of the end product by conventional chemical processes.

The active ingredients applied so far are compounds which consist of active and inactive components, or what scientists call dextrorotatory and levorotatory

molecules. Now for the first time biotechnology has made it possible to isolate and produce those molecules which are responsible for the herbicidal action.

The result: the amount of phytohormone herbicide applied to the field can be almost halved.

This advance means that the quantities stored and applied are smaller, and that use can be made of naturally replenished raw materials.

This achievement is an example of how biotechnology dovetails with chemistry.

BASF is convinced this is where the future lies and is backing its conviction to the hilt.

To translate scientific knowledge to an industrial scale is one of the most challenging tasks of our time.

BASF research for agriculture: new ideas reveal new perspectives.

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BASF

Photomicrograph of lactic acid bacteria under polarized light.

Technology At Home

Beyond Swatch, Swiss Innovating

By Thomas Netter

GENEVA — Ever since the mass-produced, multicolored Swatch sparked a revival of the Swiss watchmaking industry, Swiss watchmakers have been producing more and more watches that have less and less to do with telling you the time.

Using the Swatch and its roaring success as a model and, perhaps, an inspiration, many watch manufacturers from Geneva to the Jura have gone beyond the original mass-produced, plastic-molded cases, rainbow colors, scented wristbands and multi-colored designer dials that mark the Swatch and Swatch-clones.

Some watches like Tissot's "Rock-watch" are just that, made of a piece of granite. Others, like "Le Clip," created by an entrepreneur named Michel Jordi last year, stick to the plastic and color formula and clip on just about anything.

"Fluk-Flak," created by Swatchmaker ETA of Biene comes in 10 "child pleasing colors" and a cardboard clock that helps children learn to tell time through the use of bands on the watch named Fluk and Flak.

Undaunted by Le Clip, Swatch has struck back with its "Swissbee," a watch on a large plastic paper-clip holder intended to be more chic than Le Clip's clothespin type design.

But all this is mostly in the realm of inexpensive fashion accessories. Nov-



Avalanche watch.

elities to be worn in different colors and different outfits, which is exactly what they are intended for — with the underlying tendency to be sold in greater and diverse styles and color like shoes or bats.

But technology has also gone beyond fashion. Perhaps the most interesting and ambitious gadgets to emerge this year are the "Two-Timer" and "Pop-Recco." One saves time, and the other can help save lives.

Pop-Recco is designed to help locate people hurried by avalanches. The joint effort of Swatch and a Swedish firm, RECCO A.B. of Stockholm, is basically a Swatch that clips into a small transmitter case worn on the wrist or on a strap around the arm.

Pop-Recco works with a receiver manufactured by RECCO that has been lent or leased to 17 ski resorts and rescue services in Switzerland, and in France, eight in Austria and two in Italy. If a person is buried in the snow, the Pop-Recco reflects the signal emitted by rescue helicopters searching the area.

The system saved at least one life last winter, according to Daniel Koeb of ETA S.A. in Grenchen, where the Pop-Recco is made. The watch, in different, high-visibility colors, sells for 75 Swiss francs (about \$50). The Recco System, as the receiver is called, is not for sale, Mr. Koeb says.

Tissot's "Two-Timer," the time-saver, is more mundane, but has nevertheless been hailed as revolutionary in its production method. The Two-Timer dispenses with a step in the production of the watches that involves separate manufacture of the plate and casing for the movement.

Aside from its nontraditional blending of an analogue dial face and digital time, date and day readout, the Two-Timer's most thought-provoking element is the insertion of the watch's moving parts into a stamped case. François Niklas of Tissot, a research and development specialist, said that this process cuts the number of parts used by 10 percent, and more importantly, saves from 30 percent to 35 percent of the manufacturing cost.

The Two-Timer is made by the Tissot brand of the SMH group, or Swiss Society for Microelectronics and

Watchmaking Industries. Ltd. SMH is the hybrid of the 1983 merger of the giant ASUAG and SSIH groups under a rescue package arranged by Swiss banks amid sale losses and price cutting by cheaper, non-Swiss rivals profiting from the electronic watch boom.

The Two-Timer, in nine varying "unisex" styles and colors costs 100 Swiss francs.

Innovation does not stop there. This month the "Wind-Watch," invented by Jean-Martin Rufer and manufactured by Guy Cattin of Breuleux, goes on sale for 100 Swiss francs, and will allow wind-surfers to gauge the wind speed on land or surfboard. Waterproof and in high-visibility colors, the watch is worn around the neck on a cord.

All these watches are in the low-price range and have resulted from a deep structural change in the Swiss watchmaking industry that saw employment plummet from 90,000 in the 1970s to 32,000 in 1985. Labor-intensive manufacture of movements has in many cases been replaced by machines and, according to the Union Bank of Switzerland, a majority of watchmakers regard their future earning power prospects as favorable to satisfactory.

With 10 percent of world market volume in non-centrally planned economies and 45 percent of the value, Switzerland remains the world's leading exporter.



Inspired by the moon landings, George Daniels, above, created the "Space Traveler's Watch" with old-fashioned technology, his hands. The \$330,000 watch, shown in Basel in April, displays solar and sidereal time, which is based on the rotation of Earth in relation to the stars.



Tom Bloom/NYT

Toast of Tokyo: A Bread Machine

FOR those who have spent hours kneading dough, only to see it shrivel in the oven, Japanese companies are selling an automatic fresh bread machine. Pour water, dry yeast and flour into the top, switch it on and the machine mixes the dough, kneads it and bakes it. Up to four hours later, a fresh loaf appears.

The popularity of the machines, which sell for about 35,000 yen (\$240), has delighted the companies. Reuters reports from Tokyo, Matsushita Electric sold 150,000 of the small, square machines in the three months after it launched the product in March.

Matsushita plans to double its output of the bread machines to 100,000 sets a month. Funai Electric, an Osaka-based home appliance maker, has sold 36,000 sets since March. Toshiba, Hitachi and Sanyo two weeks ago announced plans to market similar machines.

Matsushita has no immediate export plans, but Funai plans to sell the machines in the United States and Europe by the end of the year.

PC Price Watch

PERSONAL-computer prices in the United States are heading down again. It happens every spring. But is it a good time to buy?

T.R. Reid and Michael Schrage, The Washington Post's computer watchers, are not so sure. They report that prices for IBM-PC and XT and clones are falling fast. But they point out that the sharp drop — \$200 to \$500 for various models of MS-DOS machines — began right after IBM launched its new line. They note that the PS2 (or at least the Models 50, 60 and 80) has made MS-DOS computers obsolete.

A compromise: Some existing MS-DOS computers based on the 80286 microprocessor (IBM PC-AT or Kaypro 286) or the 80386 (Compaq Deskpro 386) will be able to use the new operating system and may run some of the software.

The Latest in Entertainment: Compact Disc Goes Video

By Beth Karlin

WASHINGTON — Just when you thought you had the very latest in audio-video equipment, you're hopelessly out of date. At least that's what consumer electronics companies want you to believe.

Hot on the heels of the enormous success of audio compact discs, manufacturers now are pushing compact disc video (CDV) as the latest must-have product.

The new CDVs are five-inch (12-centimeter) platters that combine short "video-clips" with music. Two types of players have been developed to handle the CDVs. One works only with the five-inch discs, while the other "combi-player" also handles two bigger discs that feature full-length movies and concerts.

BETH KARLIN, a journalist based in Washington, specializes in technology. CHRISTINE CLAPMAN is a journalist based in Tokyo.

CDV players exclusively for the five-inch format will start at about \$500, while the combi-players will cost more than \$800 in the United States. Both offer compact disc sound and high-quality video.

CDVs were introduced at the Consumer Electronics Show in Chicago in early June. Pioneer began shipping the first products in June, with a European launch planned for fall. Others, including Hitachi, Philips, Toshiba and Yamaha, plan to start selling their products later this year or early next year.

The five-inch version is best suited to MTV-style videos and, not surprisingly, is aimed at the youth market. Combi-players, meanwhile, represent an attempt to revive an existing technology — laser discs — that never really got off the ground in the United States and Europe.

"It's old wine in a new bottle," said David Rosen, director of electronic entertainment for Link Resources, a market research firm. This format, popular in Japan, initially failed elsewhere in face of stiff competition from video cassette recorders (VCRs), which use

erasable tapes that can be recorded over and over, while laser disc players cannot record. Electronics companies are focusing on the more versatile combi-players. Pioneer, for example, has no immediate plans to introduce a dedicated five-inch player.

The marketing pitch is aimed at connoisseurs who want a complete home entertainment system, including both VCR for recording and combi-player for classics. "It's for the consumer looking for the best in sight and sound," said Michael Fidler, marketing vice president for Pioneer Electronics (U.S.A.) Inc. John Messerschmitt, who spearheaded CDV development at North American Philips and is one of the leading proponents of laser disc technology, believes that as many as 700,000 players could be purchased next year. "The price will come down," he said. "And the units and discs will get better and better."

But some analysts wonder whether there is a large market for these products, particularly the five-inch model. "The audio portion of the video clips run four times longer than the video," one industry observer pointed out.

"It's hard to understand why anyone would pay \$300 to see just a short video clip."

And some consumer electronics companies still have reservations. Sony, for example, showed a prototype in Chicago, but reportedly is still not firmly committed to CDVs.

"The key will be in the availability of discs," said Mr. Fidler of Video Review. "It's a software-driven market."

At present, there are about 2,000 titles available on 12-inch laser discs and a few hundred eight-inch laser discs featuring concerts and full-length movies.

Capitol, CBS, Polygram and Warner/Electra and other record producers say they are committed to the CDV concept. They plan to introduce more than 250 different five-inch discs between now and Christmas. The video clips will cost between \$6 and \$8 to start.

Record companies, meanwhile, are stepping up production of laser disc movies and concerts, especially classics. "Videos are becoming collectibles," Mr. Rosen said.

Movie companies also are excited about the resurrection of laser discs via combi-players.

Laser discs are much harder to pirate than VCRs.

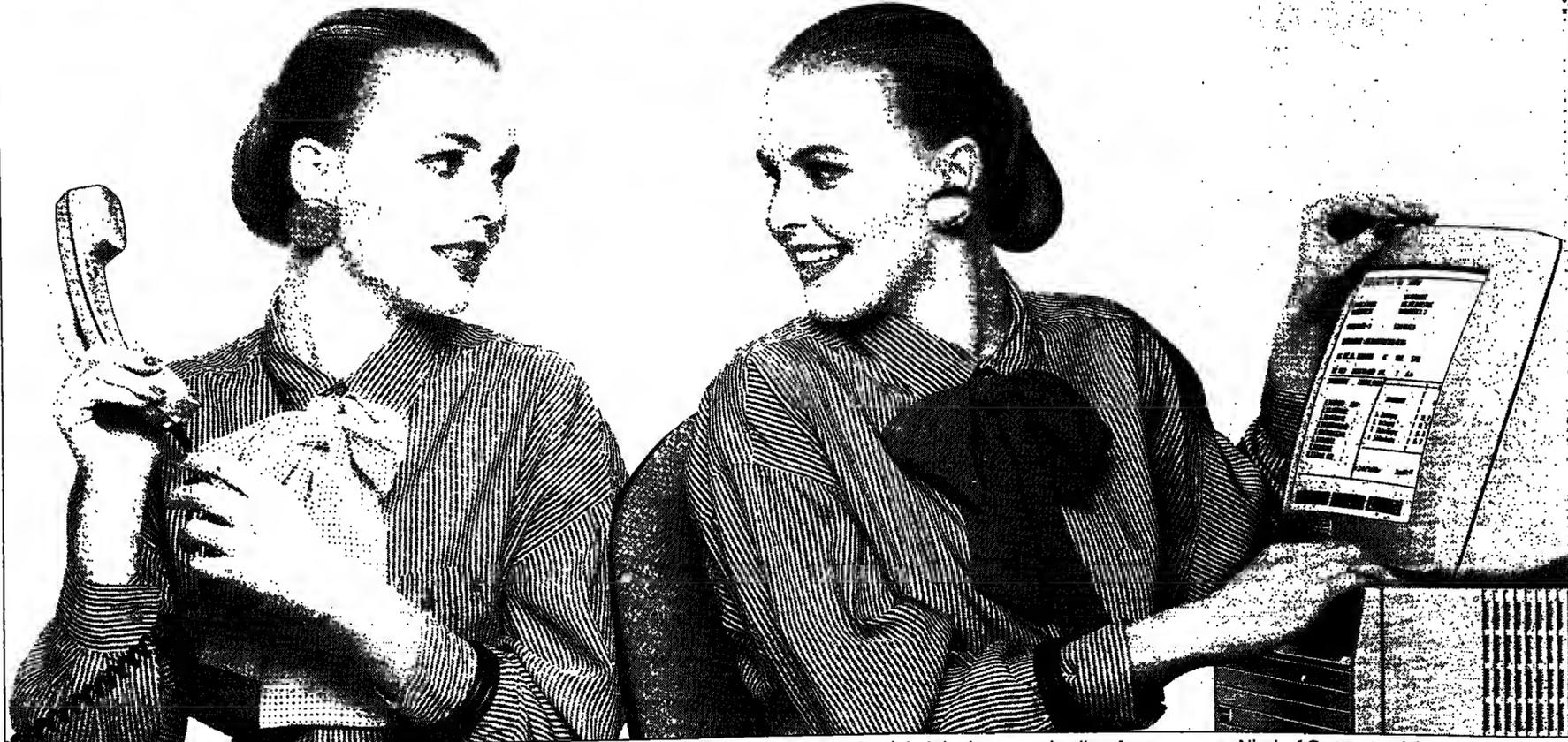
TOKYO — The CLD, or compact laser disc combination player, was introduced in Japan on June 1, priced at 148,000 yen (\$1,050) or about \$250 more than the cost in the United States, Christine Chapman reports.

A Pioneer spokesman said the differential reflects "strategic reasons" and a "different market situation."

Hajime Uchida, manager of the European section of Pioneer's international marketing division, said the European version will use a different color system than the U.S. and Japanese models. "We must make small changes in the system to fit their specifications," he said.

To achieve a finer, clear picture, more horizontal lines have been added. A super-refined digital recording is produced by doubling the filter capacity to achieve a higher frequency and less "jitter and noise," according to Pioneer, which credits its "sharp-eyed semiconductor laser."

Nixdorf turns DP and telecommunications into twins



Until now, they were not even related. But through the medium of the Nixdorf Digital PABX System 8818, EDP and telecommunications become part of an integrated in-house information system which permits simultaneous transmission of speech, data, text, and graphics over a single telephone line.

The individual workstation can now be equipped with all of the information and communications components. The result is

up-to-the-minute information, greater flexibility, and increased productivity.

The system is future-proof. In time, it will become part of the international ISDN network. It should come as no surprise that Nixdorf is at the forefront of this important development: One of the first operational digital PABX units in the world was invented by us.

So don't let artificial restraints on your vital information flow hold you back. Pick up your

now obsolete telephone, and call us for a PABX System 8818.

Nixdorf is a computer company. But more than that, we are a telecommunications company which is geared for a future in which computers and telecommunications will be fully integrated.

We're working to see to it that you will be ready for that future, too.

Nixdorf Computer AG
Fürstenallee 7, 4790 Paderborn
West Germany, Tel. 52 51/50 61 30

NIXDORF
COMPUTER

TUESDAY, JUNE 23, 1987

INTERNATIONAL STOCK MARKETS Bangkok's Bubbly Market Seems Unlikely to Burst

By PATRICK L. SMITH International Herald Tribune BANGKOK — There is a sense of déjà vu among local investors in Thailand these days. For many, the stock market's recent performance resembles nothing so much as a two-year boom in the late 1970s...

Saatchi To Merge Agencies

New York Firm Will Be Biggest Compiled by Our Staff From Dispatches NEW YORK — Saatchi & Saatchi Co. said Monday that it will merge its Dancer Fitzgerald Sample Inc. unit with Saatchi & Saatchi Compton Inc., creating the largest advertising agency in New York.

American Slated as Jardine's Tai-Pan

Old-Line Hong Kong Trading Company Taps New Blood By Nicholas D. Kristof New York Times Service HONG KONG — It is not power so much as magic that swirls about the tai-pan, or "big boss," of the Jardine Matheson group...



Brian M. Powers had just 14 months' experience at Jardine when chosen to be its new managing director.

EC Broadens Dumping Duties To Cover Parts

LUXEMBOURG — The European Community on Monday extended its anti-dumping duties on imports to cover parts assembled in the EC, a move designed to prevent manufacturers from circumventing the levies.

WEMAY BE LOOKING at a modest correction over the next few weeks...

But the economy is on a very solid footing, a securities expert said. Among the world's small, newly popular markets, however, it is hard to match Bangkok's continuing attractiveness.

The economy is on a very solid footing, a securities expert said.

At Saatchi & Saatchi Advertising Worldwide, Stuart B. Upson of DFS and O. Milton Gossett of Compton will be co-chairmen and co-chief executives.

The business style is different. The Brits are much more civilized than Americans.

— Brian M. Powers of the Jardine companies to Mr. Powers. Mr. Keswick will remain as chairman, but he says, he will spend more time outside Hong Kong.

Court Leaves Bank Role In U.S. Securities Intact

WASHINGTON — The U.S. Supreme Court, refusing Monday to become involved in a bitter dispute between bankers and the securities industry, let stand a ruling that banks may act as middlemen in the sale of commercial paper.

Currency Rates

Table with columns for Country, Currency, and Rate. Includes entries for Australia, Canada, Hong Kong, etc.

N.Y. Group Has Interest In Harcourt

WASHINGTON — A group led by Mutual Shares Corp., a New York investment firm, said Monday that it had acquired stock and subordinated debentures in Harcourt Brace Jovanovich Inc.

Japan Backs 'Buffer' Currency Fund

HAMBURG — Japan's vice minister of finance suggested Monday that the leading industrialized nations consider setting up an international buffer stock of currencies as an additional means of stabilizing exchange rates.

Interest Rates

Table with columns for Currency, Rate, and Term. Includes entries for Eurocurrency Deposits, Key Money Rates, and Asian Dollar Deposits.

U.S. Money Market Funds

Table with columns for Fund Name, Assets, and Yield. Includes entries for Merrill Lynch Ready Assets, etc.

Gold

Table with columns for Location, Price, and Change. Includes entries for New York, London, etc.

ALG advertisement: More business leaders fly ALG than any other custom air service in Europe.

Audemars Piguet advertisement: THE AUDEMARS PIGUET PERPETUAL CALENDAR. NOTHING CAN EQUAL THE ORIGINAL.

Key Money Rates

Table with columns for Instrument, Rate, and Term. Includes entries for 3-month Eurocurrency, etc.

Asian Dollar Deposits

Table with columns for Term, Rate, and Source. Includes entries for 1-month, 3-month, etc.

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Table with columns for Fund Name, Assets, and Yield. Includes entries for Merrill Lynch Ready Assets, etc.

UNICO INVESTMENT FUND advertisement: A truly European idea! The Unico Investment Fund is an international bond fund...

Mondays NYSE Closing

Tables include the nationwide prices up to the closing on Wall Street and do not reflect late trades elsewhere.

12 Month High Low Stock Div. Yld. PE St. Rts High Low Open High Low Close Chg.

Table with columns for stock symbols, prices, and changes. Includes symbols like IBM, GE, and Ford.

(Continued)

Continuation of the NYSE closing table with more stock symbols and their respective prices.

Table listing various commodities and their prices, including grains and metals.

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Table listing various commodities and their prices, including grains and metals.

Table listing various commodities and their prices, including livestock and oil.

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Russians May Export Cars to U.S. by 1991

DETROIT — The Soviet Union's AZLK auto factory plans to export Russian cars to the United States by 1991, Automotive News said Monday. The report plans reflect a new Soviet policy that allows the country's seven major automakers to pursue their own export deals. The front-drive compact, known in the Soviet Union as the Moskvich 214, would be renamed V.P. Kolomoikoff, a model designed for Western Europe is scheduled to debut at an auto show in Brussels in January. A new engine would also have to be built for the U.S. version, Mr. Kolomoikoff said. The West German automaker, Volkswagen AG, works) develop it under a cooperative agreement. The weekly magazine said that the car would have been ready for Western export sooner but for delays in negotiations between the Soviet automaker and VW.

To Our Readers The Philadelphia Currency Options were not available in this edition because of transmission delays.

Optimism Runs High On Sale of U.S. Notes

NEW YORK — Yields on U.S. Treasury securities may have risen to attract buyers at this week's refunding, but the dollar's steady help entice the customers needed to distribute the new issues, analysts said. The Treasury is set to auction \$9.75 billion of four-year notes on Wednesday, \$7.5 billion of four-year notes on Thursday, and \$7 billion of retail buying has caused concern that dealers may have to absorb most of the issues. The new supply is a burden that may spur higher yields, but this should be seen as an buying opportunity, said Phil Braverman of Irving Securities. He said that the two- and four-year notes should interest banks, which have been experiencing weak loan demand, while a spread of nearly 3 points between the seven-year note and comparable Japanese securities could also spur demand. Economists at Salomon Brothers Inc. wrote in the firm's international market roundup that the widening of interest rate differentials between the United States and Japan has helped to attract renewed flows of private capital into the U.S. debt market. This trend, along with market perceptions the U.S. external trade position is improving, should keep the dollar underpinned at current levels, they added.

NYSE High-Lows

Table listing NYSE high and low prices for various stocks.

AMEX High-Lows

Table listing AMEX high and low prices for various stocks.

Paris Commodities

Table listing Paris commodity prices for various goods.

London Commodities

Table listing London commodity prices for various goods.

Dividends

Table listing dividend payments for various companies.

Spot Commodities

Table listing spot prices for various commodities.

Oslo Presses Talks On Sanction Threat

OSLO — Norway's defense minister will meet with officials in Washington to discuss threats of trade sanctions against Oslo for exporting high-technology equipment to the Soviet Union, the Foreign Ministry said. The announcement Sunday said Defense Minister Johan Jorgen Holten and Trade Secretary Karin Stoenberg would discuss investigations under way in Norway with U.S. legislators who are seeking to have sanctions imposed. The investigations focus on exports of computers by the state arms company Kongsberg Vaapenfabrik to the Soviet Union to run machines that manufacture silent submarine propellers.

London Metals

Table listing London metal prices for various commodities.

S&P 100 Index Options

Table listing S&P 100 index option prices.

U.S. Treasuries

Table listing U.S. Treasury bond prices.

Continental Bank Raises Loss Reserve

CHICAGO — Continental Bank's loss reserve will increase by \$50 million to \$1.1 billion in the second quarter, and the bank expects a net loss of about \$470 million in the period. The bank holding company said it expects a loss of about \$300 million for the full year. The reserve was boosted because of problem loans in certain less developed countries, said the bank, which in 1983 nearly collapsed because of separately. Continental said it will restate its earnings for 1983 through 1986 because of a real estate transaction recorded in 1983.

DM Futures Options

Table listing DM futures option prices.

Electrification in Sri Lanka

COLOMBO, Sri Lanka — Seventy-five percent of Sri Lanka households do not have electricity, according to a 1986 survey published here Monday by the central bank. The figure in 1982, was 87 percent.

COMPUTER

BUSINESS ROUNDUP

Akzo NV Agrees to Buy Stauffer Unit From ICI

By Ronald van de Krol
Special to the Herald Tribune
ARNHEM, The Netherlands — Akzo NV, the Dutch chemical and man-made fibers group, said Monday that it had agreed to buy Stauffer Chemical Co.'s specialty chemicals business from Imperial Chemical Industries PLC of Britain for \$625 million.

The transaction, to be completed next month, marks the third time that all or part of U.S.-based Stauffer has changed hands since December.

Unilever, the British-Dutch food and consumer products group, acquired Stauffer as part of its \$3.1 billion takeover of Chesebrough-Pond's Inc., the U.S.-based pharmaceuticals group, in late 1986.

Earlier this month, Unilever recouped more than half of the Chesebrough-Pond price by selling Stauffer to ICI for \$1.69 billion.

ICI made clear that it was buying Stauffer for its herbicides and other agrochemicals, and would sell the specialty chemicals division.

Akzo said the acquisition would expand its presence on the U.S. market, add to its range of specialty chemicals worldwide and boost research activities.

Stauffer's specialty products include high-performance lubricants, flame retardants and catalysts.

An Akzo spokesman said Stauffer's specialty chemicals business had consolidated revenue of \$325 million in 1986, plus a 50 percent share in joint ventures with total revenue of \$1.25 billion.

The Stauffer division has a research center and six production plants in the United States, as well as activities in France, Japan, Argentina, West Germany, Belgium, Brazil, Australia and Canada.

Akzo's own chemical product division, which includes basic and specialty chemicals, accounted for about a quarter of last year's group revenue of 15.6 billion guilders (\$7.6 billion at current rates).

In March, Akzo's chairman, Aarnout Louw, said the company aimed to raise its level of U.S. investment to at least 20 percent of total assets.

The Akzo spokesman said the Stauffer takeover would raise U.S. assets to 19 percent.

Daihatsu Motor Asks Official Aid In Polish Deal

The Associated Press
TOKYO — Four Japanese companies, led by Daihatsu Motor Co., have asked the government to support a Polish auto manufacturing project that reportedly would cost 100 billion yen (\$704 million), the Ministry of International Trade and Industry said Monday.

MITI said it told the group that support would be difficult because creditor countries have not decided what to do about Poland's \$33.5 billion foreign debt. The group includes three trading firms, Mitsui & Co., C. Itoh & Co. and Sumitomo Corp.

The Nihon Keizai newspaper reported Sunday that under an agreement to be signed later this year, Poland's national automaker, FSO, is to assemble 3,000 of Daihatsu's compact cars a year beginning in 1988.

Later, the Japanese government would supply loans to build an integrated automobile plant capable of producing 120,000 cars a year beginning in 1992, Nihon Keizai said.

Marriott, Pritzkers Said to Pursue Allegis Buyout

By Sharon Warren Walsh
Washington Post Service

WASHINGTON — Marriott Corp. and Chicago's Pritzker family have been pursuing a joint buyout of Allegis Corp., the parent company of United Airlines, Hertz Corp. and the Westin and Hilton International hotel chains, according to sources close to the negotiations.

If they succeeded, the two interests would be likely to divide the Westin and Hilton International properties between them and sell off the airline and the car rental company, according to financial sources. Marriott is a hotels and foods group, and the Pritzkers own Hyatt Hotels Corp.

The cost of such a takeover has been estimated by analysts at about \$7 billion. By buying all of Allegis and selling off the non-hotel properties, Marriott and the Pritzkers would probably get the hotels for a better price than by bidding for the hotels separately, sources said.

The board of Allegis, which formerly was UAI Inc., said on June 10 that it planned to sell the company's rental car and hotel subsidiaries.

Terry Sowers, a spokesman for Marriott, said Monday: "We are currently having no discussions regarding Allegis."

But he said that, "under the proper circumstances," Marriott would be interested in acquiring the travel conglomerate's hotel businesses.

Mr. Sowers would not say whether Marriott had talked in the past with Pritzker representatives about Allegis.

However, industry sources asserted that Marriott and the Chicago-based Pritzkers had been involved in discussions for Allegis as recently as last week.

Allegis's shares closed Monday at \$90.375, up 12.5 cents, on the New York Stock Exchange. Marriott also closed higher, at \$42.875, up 12.5 cents.

Marriott, based in Bethesda, Maryland, reported sales of \$5.3 billion in 1986. Last year it bought rival Saga Corp. for about \$700 million and recently has been negotiating to buy Residence Inns and the Denny's Inc. restaurant chain.

Asked whether the Pritzkers were discussing a joint bid with Marriott, Darryl Hardley, Leonard, president of Hyatt Hotels Corp., said: "If that's true, I don't know it."

Representatives of Allegis could not be reached for comment.

The Pritzker family, which also owns Braniff Airlines, began to buy a stake in Allegis several months ago, at about the time United's pilots union put the company into play by proposing to buy United for \$4.5 billion.

Spokesmen for the union have said they will continue to try to buy United Airlines, and sources said Sunday that both Marriott and the Pritzkers would want to sell the airline.

Representatives of the pilots union could not be reached for comment Sunday.

A second group of Allegis employees has also drawn up a plan to acquire United Airlines as an alternative to the pilots' bid.

A large number of buyers, including Hilton

Hotels Corp., which is unrelated to Hilton International, and Japanese and British groups, are said to be interested in Allegis's hotel chains.

Analysts have estimated that the two chains, which have been consistently profitable, are currently worth about \$2 billion.

Both Hilton International and Westin are valuable for their real estate as well as for their hotels.

Donald Trump, a New York real estate developer who owns a small amount of Allegis stock, has reportedly said that New York's Westin Plaza alone would be worth \$750 million if it were turned into condominiums.

Marriott, which has 13 hotels outside the United States, has long been interested in expanding its international presence. Industry sources have said that the Westin hotels in Japan, Canada and Hawaii are of particular interest to Marriott.

Marriott currently owns more than 200 hotels and resorts, while Hyatt Hotels Corp. operates 80 hotels in the United States, Canada and the Caribbean. Hyatt International, a separate company, and its subsidiaries operate 41 hotels in 25 other countries.

Allegis Corp. became a diversified travel services company under Richard J. Ferris, who was forced to resign as chairman on June 9. The company's new chairman is Frank A. Olson, former chairman of Hertz Corp.

The Allegis board has said it hopes to sell off the parts of the company in a way that would maximize the company's value to shareholders. Mr. Ferris had opposed splitting up the conglomerate.



ACCOR
A HOTEL, CATERING AND SERVICE COMPANY

DISTRIBUTION OF FREE STOCK PURCHASE WARRANTS

On June 22, 1987, the Board of Directors of Accor voted to distribute to Company shareholders one free subscription warrant for each share held. Ten warrants give right to subscription to one ACCOR share at the price of F.Fr. 625 before November 30, 1989 or F.Fr. 700 between December 1, 1989 and November 30, 1990. The warrants have received the visa (No. 87-218) of the French Stock Exchange Commission (Commission des Opérations de Bourse) and will be listed on the Paris Bourse.

Until November 30, 1990, new shareholders through exercise of 1985 C warrants held or through conversion of the French Francs 1983 convertible debentures or the U.S. dollar 1984 convertible debentures are eligible for the free warrant.

After November 30, 1990, the rates of conversion of debentures into shares will be adjusted.

This free issue is a consequence of the recent strengthening of Accor's shareholders' equity and should give both actual and potential shareholders a better opportunity to participate in Accor's expansion, while providing additional funds to finance the company's growth.

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Toshiba Corp.: 'We're Not Toshiba Machine'

Reuters

TOKYO — Toshiba Corp. sought to distance itself Monday from a subsidiary accused of selling high technology secrets to the Soviet Union.

"We would like the U.S. government to understand that Toshiba and Toshiba Machine are different," a Toshiba spokesman said. "They may look the same from

the outside, and there is a stock-holding relationship, but the management is completely separate."

A U.S. deputy assistant defense secretary, Stephen D. Bryen, said last week that the Defense Department had stopped approving new military contracts with Toshiba Corp. because of Toshiba Machine Co.'s alleged transfer of advanced

submarine technology to the Soviet Union in 1983 and 1984.

The ban could cost the parent company hundreds of millions of dollars in electronics business with the Pentagon.

Toshiba Corp., which owns 50 percent of Toshiba Machine, has already forced Toshiba Machine's president and four other senior officials to resign.

Japan Airport Chief Rebukes Foreign Firms

Reuters

OSAKA, Japan — The president of Kansai International Airport Co. berated foreign companies Monday for not trying hard enough to win contracts for the \$2 billion construction project, which is a source of friction between Japan and its trading partners.

"Whether Americans are putting enough effort into entering the Japanese market is 'doubtful,'" Yoshihiro Takeuchi said in an interview.

Several countries, led by the United States, have charged the government and the airport authority with shutting them out of the lucrative project near Osaka, which is to be completed in 1993.

But Mr. Takeuchi said it was up to foreign companies to adapt to

Japanese markets. "They should not expect Japan to change to meet their demands," he said.

"The Japanese put forth a lot of effort in trying to export," he added. "They strive hard to overcome language, culture and other differences."

"But foreign companies did not seem to put as much effort into penetrating the Japanese market," he said. "Some even believed they could enter the local construction market without speaking Japanese."

Mr. Takeuchi last week rejected U.S. calls for changes in the design teams and bidding procedures for the project.

"Unlike American firms, we have a large number of in-house

engineers," he told S. Bruce Smart Jr., the U.S. undersecretary for commerce, in a letter. "We therefore do not intend to include foreign or any other outside firms in our design teams."

In the interview, Mr. Takeuchi said that English or German speaking technicians could not succeed if they could not speak to Japanese construction workers.

"Some foreign people have splendid ideas, but with loopholes," he added. "At present, I think the Japanese are comparatively skilled."

But Mr. Takeuchi said that foreign companies would be given a fair chance to win construction contracts for the airport.

"If the foreign companies are intelligent, offer good products at low prices, we will welcome them," he said. "It's silly to limit the work to Japanese firms."

Earlier this month, Kansai International awarded consultancy contracts to airport authorities from Britain, France, West Germany and the United States.

American Brands In \$600 Million Offer for ACCO

Reuters

OLD GREENWICH, Connecticut — American Brands Inc. said Monday that it has agreed to acquire ACCO World Corp., a maker of office products, in a transaction valued at more than \$600 million.

Under the agreement, American Brands will soon begin a tender offer of \$29 for each ACCO share. The announcement pushed up ACCO shares by \$4.875 on the New York Stock Exchange, to \$28.375.

American Brands, a leading producer of cigarettes and liquor with its own office products subsidiary, said the tender offer is conditional upon selling the stapling product line of ACCO and two minor office product lines of American Brands.

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PRICES AT 164.87

A: U.S. DOLLAR "CASH"	\$10.11
B: MULTICURRENCY "CASH"	\$14.21
C: DOLLAR BONDS	\$12.92
D: MULTICURRENCY BONDS	\$16.89
E: STERLING BONDS	\$11.95
F: DEUTSCHMARK BONDS	DM10.54
G: YEN BONDS	YEN11.00
H: SOU BONDS	ECU10.79
I: STERLING EQUITY	£13.45
J: U.S. EQUITIES	\$14.22
K: JAPANESE EQUITIES	YEN139.00
L: GLOBAL EQUITIES	\$12.62
M: STERLING "CASH"	£10.21
Z: GOLD	\$10.68

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as a member of our Boards of Directors

DCNY CORP.
DISCOUNT CORPORATION OF NEW YORK
58 Pine Street, New York, N.Y. 10005

HARCOURT: Potential Stake

(Continued from first finance page)

ceeds Harcourt's available funds for dividends.

His suit also seeks to prevent Harcourt from issuing super voting preference stock to First Boston Securities Corp., and contests the June 8 conversion date for debentures as coercive and deceptive.

In a counterclaim filed Monday in New York, Harcourt alleged that British Printing failed to make disclosures required under federal securities laws.

Harcourt said that British Printing, Mr. Maxwell and the British company's majority shareholder, Bergamo Holdings Foundation,

failed to file documents with the SEC on their stake in Harcourt.

The counterclaim noted that British Printing is arguing in the Florida state courts that it is entitled to convert its Harcourt debentures into more than nine million shares of Harcourt common stock.

Rumors, meanwhile, continued in London that Harcourt was planning a takeover of Reed International PLC, the British paper and printing company.

Harcourt has refused to comment on the rumor. Traders in New York said they were skeptical of the report because it would be difficult for Harcourt to finance the takeover of another company if it carries out its recapitalization.

Benedetti, Gardini Boost Cooperation

Reuters

MILAN — Raul Gardini, of the Ferruzzi and Montedison SPA groups, and Carlo De Benedetti, who runs the Olivetti SPA and Buitoni SPA groups, are planning to bolster a business alliance forged last year, informed sources said Monday.

The sources said Mr. Gardini would take about half of Mr. de Benedetti's 19 percent stake in a Milan investment bank, Euromobiliare SPA, and would acquire a minority interest in Mr. Benedetti's main industrial holding company, CIR.

The men, two of Italy's most powerful industrialists, would also form a jointly owned financial services company in which Euromobiliare would have a substantial role.

The sources estimated the cost of Mr. Gardini's Euromobiliare purchase at 18 billion lire (\$14 million).

Ferruzzi officials were not available for comment, but a spokesman said Mr. de Benedetti might make a statement on Tuesday when he addresses Olivetti shareholders.

The plan, if confirmed, would consolidate an alliance first struck last autumn that gave M. de Benedetti minority stakes in two major companies in the fast-expanding Ferruzzi agri-industrial group.

BANGKOK: Boom Stirs Déjà Vu

(Continued from first finance page)

ing substantial premiums to their listed prices in off-market trades among foreign buyers.

Similarly, the Bangkok Fund, which is listed in London, and the Thailand Fund, listed in New York, are both selling at 30 to 40 percent above net asset value, assuming that a seller can be found.

"If you're willing to be patient, you can still buy stock," said Marshall Auerback, director of G.T. Management (Asia) Ltd. "But it is a matter of moving slowly, accumulating a little bit at a time."

As in other small markets, foreign institutions are also branching out into second- and third-tier issues, in which supply is less of a

problem. G.T. now has positions in 20 Bangkok shares, according to Mr. Auerback, substantially more than would have been the case only a year or two ago.

Among the choices in this category are Saha Pathana Interholdings, a consumer-products group; Dusit Thani, a solid hotel listing that may be expanding its activities; and National Finance & Securities, a brokerage and finance company.

While these issues still represent value in the Bangkok market, all of them have at least doubled in price this year. National Finance & Securities, whose outlook is largely dependent on the market itself, has moved from 187 baht at the end of 1986 to 390.

The government will set a secret cut-off price and will accept in full applications above that price.

Previous sales have seen many times oversubscribed and investors haven't been able to buy as many shares as they have wanted.

U.K. Airport Authority Stock To Be Sold on a Tender Basis

The Associated Press

LONDON — The government launched its privatization of Britain's state-owned airports on Monday with a novel twist of giving investors the opportunity to make individual tender offers for some of the stock.

The sale of BAA, formerly known as British Airports Authority, is expected to raise more than £1 billion, or about \$1.61 billion.

It is the latest in Prime Minister Margaret Thatcher's program to sell off billions of dollars worth of state-owned assets and to get more shares into the hands of the general public. Most recently, the government sold Rolls-Royce, the airplane engine maker, and British Airways.

In the latest sale, the government plans to offer a total of 500 million

shares to the public and institutional investors.

Most of that stock is to be sold at a fixed price, which is to be announced on July 8. This is how previous privatizations have been structured.

But this time up to a quarter of the shares will be set aside for sale through tender offers by institutional investors and individuals. These shares will be sold to the highest bidders who must offer to pay at least the same amount as the fixed price.

The government will set a secret cut-off price and will accept in full applications above that price.

Previous sales have seen many times oversubscribed and investors haven't been able to buy as many shares as they have wanted.

Leh
LEVERAGED CAPITAL HOLDINGS N.V.
Curacao, Netherlands Antilles

Notice of Annual General Meeting of Shareholders

Notice is hereby given that an Annual General Meeting of Shareholders of Leveraged Capital Holdings N.V. has been called by the Manager, Intimis Management Company N.V. The Meeting will take place at the offices of the Company, John B. Gorsiraweg 6, Willemstad, Curacao, Netherlands Antilles on 16th July, 1987 at 10.00 e.m.

The Agenda includes, inter alia, a proposal to amend the Articles of Incorporation of the Company.

The Agenda, the proposed amendments and the Annual Report for 1986 may be obtained from the offices of the Company or from the Paying Agent mentioned hereunder.

Shareholders will be admitted to the meeting on presentation of their certificates or of vouchers, which may be obtained from the Paying Agent against delivery of certificates on or before 10th July, 1987.

Willemstad, 23rd June, 1987.

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Paying Agent:
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If you are an individual investor, and the value of your portfolio is equivalent to \$1 million or more, we'd like to introduce ourselves with a copy of our *Monthly Research Focus*.

Contact:
William Landreth, Partner
Goldman Sachs
International Corp.
5 Old Bailey
London EC4M 7AH.
Tel: 01-489-2205.



Monday's AMEX Closing

Tables include the nationwide prices up to the closing on Wall Street and do not reflect late trades elsewhere.

12 Month High	Low	Stock	Chg.	Yield	PE	Div.	Div. Yield
100	100	ABX	+	10	10	10	10
100	100	ABC	+	10	10	10	10
100	100	DEF	+	10	10	10	10
100	100	GHI	+	10	10	10	10
100	100	JKL	+	10	10	10	10
100	100	MNO	+	10	10	10	10
100	100	PQR	+	10	10	10	10
100	100	STU	+	10	10	10	10
100	100	VWX	+	10	10	10	10
100	100	YZA	+	10	10	10	10

12 Month High	Low	Stock	Chg.	Yield	PE	Div.	Div. Yield
100	100	ABC	+	10	10	10	10
100	100	DEF	+	10	10	10	10
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100	100	MNO	+	10	10	10	10
100	100	PQR	+	10	10	10	10
100	100	STU	+	10	10	10	10
100	100	VWX	+	10	10	10	10
100	100	YZA	+	10	10	10	10

12 Month High	Low	Stock	Chg.	Yield	PE	Div.	Div. Yield
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100	100	PQR	+	10	10	10	10
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100	100	VWX	+	10	10	10	10
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100	100	MNO	+	10	10	10	10
100	100	PQR	+	10	10	10	10
100	100	STU	+	10	10	10	10
100	100	VWX	+	10	10	10	10
100	100	YZA	+	10	10	10	10

INTERNATIONAL FUNDS (Quotations Supplied by Funds Listed) 22nd June 1987

The market value quotations are supplied by the Funds listed with the exception of some quotes based on issue price.

Fund Name	Price	Fund Name	Price
ALM MANAGEMENT	100.00	Windsor Recovery Ltd.	100.00
APAC FINANCIAL CORP.	100.00	Windsor Sec. Inv. Ltd.	100.00
Asiatic Pacific	100.00	Windsor Tech. Inv. Ltd.	100.00
BANK OF AMERICA	100.00	Windsor Worldw. Inv. Ltd.	100.00
BANK OF CANADA	100.00	Windsor Worldw. Bond	100.00
BANK OF MONTREAL	100.00	Windsor Worldw. Divd.	100.00
BANK OF NEW YORK	100.00	Windsor Worldw. Growth	100.00
BANK OF SOUTH AFRICA	100.00	Windsor Worldw. Income	100.00
BANK OF SWITZERLAND	100.00	Windsor Worldw. Int'l	100.00
BANK OF UTAH	100.00	Windsor Worldw. Multi	100.00
BANK OF WASHINGTON	100.00	Windsor Worldw. Real Est.	100.00
BANK OF WISCONSIN	100.00	Windsor Worldw. Tech.	100.00
BANK OF WYOMING	100.00	Windsor Worldw. Value	100.00
BANK OF ALABAMA	100.00	Windsor Worldw. Ventr.	100.00
BANK OF CALIFORNIA	100.00	Windsor Worldw. Yield	100.00
BANK OF COLORADO	100.00	Windsor Worldw. Zoned	100.00
BANK OF FLORIDA	100.00	Windsor Worldw. Zoned II	100.00
BANK OF GEORGIA	100.00	Windsor Worldw. Zoned III	100.00
BANK OF ILLINOIS	100.00	Windsor Worldw. Zoned IV	100.00
BANK OF INDIANA	100.00	Windsor Worldw. Zoned V	100.00
BANK OF KANSAS	100.00	Windsor Worldw. Zoned VI	100.00
BANK OF LOUISIANA	100.00	Windsor Worldw. Zoned VII	100.00
BANK OF MARYLAND	100.00	Windsor Worldw. Zoned VIII	100.00
BANK OF MASSACHUSETTS	100.00	Windsor Worldw. Zoned IX	100.00
BANK OF MICHIGAN	100.00	Windsor Worldw. Zoned X	100.00
BANK OF MINNESOTA	100.00	Windsor Worldw. Zoned XI	100.00
BANK OF MISSISSIPPI	100.00	Windsor Worldw. Zoned XII	100.00
BANK OF NEBRASKA	100.00	Windsor Worldw. Zoned XIII	100.00
BANK OF NEVADA	100.00	Windsor Worldw. Zoned XIV	100.00
BANK OF NEW JERSEY	100.00	Windsor Worldw. Zoned XV	100.00
BANK OF NEW YORK	100.00	Windsor Worldw. Zoned XVI	100.00
BANK OF NORTH CAROLINA	100.00	Windsor Worldw. Zoned XVII	100.00
BANK OF NORTH DAKOTA	100.00	Windsor Worldw. Zoned XVIII	100.00
BANK OF OHIO	100.00	Windsor Worldw. Zoned XIX	100.00
BANK OF OKLAHOMA	100.00	Windsor Worldw. Zoned XX	100.00
BANK OF PENNSYLVANIA	100.00	Windsor Worldw. Zoned XXI	100.00
BANK OF RHODE ISLAND	100.00	Windsor Worldw. Zoned XXII	100.00
BANK OF SOUTH CAROLINA	100.00	Windsor Worldw. Zoned XXIII	100.00
BANK OF TEXAS	100.00	Windsor Worldw. Zoned XXIV	100.00
BANK OF VERMONT	100.00	Windsor Worldw. Zoned XXV	100.00
BANK OF VIRGINIA	100.00	Windsor Worldw. Zoned XXVI	100.00
BANK OF WASHINGTON	100.00	Windsor Worldw. Zoned XXVII	100.00
BANK OF WISCONSIN	100.00	Windsor Worldw. Zoned XXVIII	100.00
BANK OF WYOMING	100.00	Windsor Worldw. Zoned XXIX	100.00
BANK OF ALABAMA	100.00	Windsor Worldw. Zoned XXX	100.00

Fund Name	Price	Fund Name	Price
ALM MANAGEMENT	100.00	Windsor Recovery Ltd.	100.00
APAC FINANCIAL CORP.	100.00	Windsor Sec. Inv. Ltd.	100.00
Asiatic Pacific	100.00	Windsor Tech. Inv. Ltd.	100.00
BANK OF AMERICA	100.00	Windsor Worldw. Inv. Ltd.	100.00
BANK OF CANADA	100.00	Windsor Worldw. Bond	100.00
BANK OF MONTREAL	100.00	Windsor Worldw. Divd.	100.00
BANK OF NEW YORK	100.00	Windsor Worldw. Growth	100.00
BANK OF SOUTH AFRICA	100.00	Windsor Worldw. Income	100.00
BANK OF SWITZERLAND	100.00	Windsor Worldw. Int'l	100.00
BANK OF UTAH	100.00	Windsor Worldw. Multi	100.00
BANK OF WASHINGTON	100.00	Windsor Worldw. Real Est.	100.00
BANK OF WISCONSIN	100.00	Windsor Worldw. Tech.	100.00
BANK OF WYOMING	100.00	Windsor Worldw. Value	100.00
BANK OF ALABAMA	100.00	Windsor Worldw. Ventr.	100.00
BANK OF CALIFORNIA	100.00	Windsor Worldw. Yield	100.00
BANK OF COLORADO	100.00	Windsor Worldw. Zoned	100.00
BANK OF FLORIDA	100.00	Windsor Worldw. Zoned II	100.00
BANK OF GEORGIA	100.00	Windsor Worldw. Zoned III	100.00
BANK OF ILLINOIS	100.00	Windsor Worldw. Zoned IV	100.00
BANK OF INDIANA	100.00	Windsor Worldw. Zoned V	100.00
BANK OF KANSAS	100.00	Windsor Worldw. Zoned VI	100.00
BANK OF LOUISIANA	100.00	Windsor Worldw. Zoned VII	100.00
BANK OF MARYLAND	100.00	Windsor Worldw. Zoned VIII	100.00
BANK OF MASSACHUSETTS	100.00	Windsor Worldw. Zoned IX	100.00
BANK OF MICHIGAN	100.00	Windsor Worldw. Zoned X	100.00
BANK OF MINNESOTA	100.00	Windsor Worldw. Zoned XI	100.00
BANK OF MISSISSIPPI	100.00	Windsor Worldw. Zoned XII	100.00
BANK OF NEBRASKA	100.00	Windsor Worldw. Zoned XIII	100.00
BANK OF NEVADA	100.00	Windsor Worldw. Zoned XIV	100.00
BANK OF NEW JERSEY	100.00	Windsor Worldw. Zoned XV	100.00
BANK OF NEW YORK	100.00	Windsor Worldw. Zoned XVI	100.00
BANK OF NORTH CAROLINA	100.00	Windsor Worldw. Zoned XVII	100.00
BANK OF NORTH DAKOTA	100.00	Windsor Worldw. Zoned XVIII	100.00
BANK OF OHIO	100.00	Windsor Worldw. Zoned XIX	100.00
BANK OF OKLAHOMA	100.00	Windsor Worldw. Zoned XX	100.00
BANK OF PENNSYLVANIA	100.00	Windsor Worldw. Zoned XXI	100.00
BANK OF RHODE ISLAND	100.00	Windsor Worldw. Zoned XXII	100.00
BANK OF SOUTH CAROLINA	100.00	Windsor Worldw. Zoned XXIII	100.00
BANK OF TEXAS	100.00	Windsor Worldw. Zoned XXIV	100.00
BANK OF VERMONT	100.00	Windsor Worldw. Zoned XXV	100.00
BANK OF VIRGINIA	100.00	Windsor Worldw. Zoned XXVI	100.00
BANK OF WASHINGTON	100.00	Windsor Worldw. Zoned XXVII	100.00
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BANK OF WYOMING	100.00	Windsor Worldw. Zoned XXIX	100.00
BANK OF ALABAMA	100.00	Windsor Worldw. Zoned XXX	100.00

Floating-Rate Notes

Issuer/Net	Current Yield	Issue Date	Term
ALM MANAGEMENT	100.00	1987	12 Months
APAC FINANCIAL CORP.	100.00	1987	12 Months
Asiatic Pacific	100.00	1987	12 Months
BANK OF AMERICA	100.00	1987	12 Months
BANK OF CANADA	100.00	1987	12 Months
BANK OF MONTREAL	100.00	1987	12 Months
BANK OF NEW YORK	100.00	1987	12 Months
BANK OF SOUTH AFRICA	100.00	1987	12 Months
BANK OF SWITZERLAND	100.00	1987	12 Months
BANK OF UTAH	100.00	1987	12 Months
BANK OF WASHINGTON	100.00	1987	12 Months
BANK OF WISCONSIN	100.00	1987	12 Months
BANK OF WYOMING	100.00	1987	12 Months
BANK OF ALABAMA	100.00	1987	12 Months
BANK OF CALIFORNIA	100.00	1987	12 Months
BANK OF COLORADO	100.00	1987	12 Months
BANK OF FLORIDA	100.00	1987	12 Months
BANK OF GEORGIA	100.00	1987	12 Months
BANK OF ILLINOIS	100.00	1987	12 Months
BANK OF INDIANA	100.00	1987	12 Months
BANK OF KANSAS	100.00	1987	12 Months
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BANK OF MARYLAND	100.00	1987	12 Months
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BANK OF MICHIGAN	100.00	1987	12 Months
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BANK OF NEBRASKA	100.00	1987	12 Months
BANK OF NEVADA	100.00	1987	12 Months
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BANK OF OKLAHOMA	100.00	1987	12 Months
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BANK OF SOUTH CAROLINA	100.00	1987	12 Months
BANK OF TEXAS	100.00	1987	12 Months
BANK OF VERMONT	100.00	1987	12 Months
BANK OF VIRGINIA	100.00	1987	12 Months
BANK OF WASHINGTON	100.00	1987	12 Months
BANK OF WISCONSIN	100.00	1987	12 Months
BANK OF WYOMING	100.00	1987	12 Months
BANK OF ALABAMA	100.00	1987	12 Months

Pounds Sterling

Issuer/Net	Current Yield	Issue Date	Term
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Handwritten note: 100/100

CURRENCY MARKETS

Dollar Rises Sharply in N.Y., Europe

NEW YORK — The dollar surged higher Monday, making dramatic advances against the mark and yen as weakness in the British pound spilled into most major currencies. Gold and silver fell sharply. Dealers said that the dollar's resilience of recent days reinforced speculation that it has found a near-term bottom. But they attributed the rise Monday largely to technical factors, including pre-programmed buying. In New York, the dollar closed at 1.8470 Deutsche marks, up from 1.8393 on Friday; at 146.20 yen, up from 144.80; at 1.5205 Swiss francs, up from 1.5205; and at 6.1565 French francs, up from 6.1055. It was also higher against the pound, which closed at \$1.5875, down more than 2 cents from \$1.6110 on Friday. The dollar made a very strong move, said Christopher Bourdoin, vice president in Bank of America's corporate foreign-exchange unit. "Most people in the New York market were expecting the dollar to get stronger this week, but it all seems to have happened in one day."

He said a rumor that Saudi Arabia was diversifying its portfolio by selling yen- and mark-denominated bonds and getting into dollars encouraged traders to buy dollars. Another supportive factor, he said, is that dollar-linked commodity prices, especially oil, have been strong lately. Since customers purchase oil with U.S. dollars, rising oil prices signal stronger dollar demand. Republic Bank in New York closed cash gold at \$437.50 an ounce, down 7.50 from \$445.00 Friday. Silver plunged to \$6.73 an ounce from \$7.158 on the cash market. In Europe, the dollar rose by more than 1 pfennig to its highest value against the mark since March. In London, the dollar closed at 1.8407 DM, up from 1.8305 on Friday; at 145.85 yen, up from 145.05; and at 6.1325 French francs, up from 6.1025. The dollar was also higher against the pound, which closed at \$1.5950, more than 2 cents down from \$1.6170 on Friday, and its lowest point since mid-March. "It's getting more as though the market believes the dollar has bottomed out," said the top trader at one U.S. bank. "The market is more fundamentally disposed toward the dollar as well as supported by technical considerations," he added. The pound fell fast enough to prompt the Bank of England in step in and buy sterling in a bid to steady it, some dealers reported. Earlier in Europe, the dollar was fixed in Frankfurt at 1.8353 DM, up from 1.8238 on Friday; and in Paris at 6.1235 French francs, up from 6.0940. In Zurich, the dollar closed at 1.5277 Swiss francs, up from 1.5202 on Friday. (UPI, Reuters)

Yeutter Says Export Problem No Longer Dollar

WASHINGTON — The U.S. trade representative, Clayton K. Yeutter, said Monday that if exports do not increase now that the weak dollar has made American products cheaper, quality, service or marketing skills may be to blame. Speaking at an American Stock Exchange conference, he said that "from a price standpoint, we are tremendously competitive in most things U.S. businesses sell overseas." "So if our exports do not begin to accelerate," he said, then "the exporters of this country must search their souls for other explanations because it's not price that will preclude those exports from moving up." "It must then be quality or service or international marketing skills, he said, adding, "we must begin to focus on those elements of the export-import process," he said.

JARDINE: Hong Kong's Trading Giant Prepares for American Tai-Pan

(Continued from first finance page) quitions in the United States and Britain, though he says this could be a single \$2 billion deal or a string of \$100 million purchases. Mr. Keswick says he would like a major U.S. presence, and he adds that Mr. Powers might want to return to United States in five years or so and run the American wing of Jardine. But familiarity with the U.S. market was not the reason for choosing Mr. Powers. Indeed, his nationality may have worked against him a little, in the clubby world of British-run Hong Kong companies. His open style has ruffled some feathers here as well as abroad. "The business style is different," he said. "The Brits are much more civilized than Americans." And though Mr. Powers has joined the Jockey Club and he and his wife have entertained at their home on the Peak, their presence in Hong Kong's social circuit is subtle. "I like Hong Kong," he said, "but I work very long hours and I'm very committed to my job." But if Mr. Powers has not always displayed enthusiasm for drinking and partying, he is a man of letters. He was beginning in the United States. After two years there, Mr. Powers accepted a job as an attorney with the Ford Foundation. However, almost immediately he was put in charge of a large investment portfolio that included venture capital and real estate. One of his first acts was to foreclose on two big real estate developments in the belief that the auction could run them better than the developers. Colleagues noticed that. Mr. Powers was at the Ford Foundation when James D. Wolfensohn, an Australian-born financier, called him. Mr. Wolfensohn was planning to set up a New York investment bank, and had heard about Mr. Powers from a Debevoise & Plimpton partner. So after four years at the foundation, Mr. Powers joined Mr. Wolfensohn, becoming his chief assistant at James D. Wolfensohn Inc. Soon after the firm opened, a man named Simon Keswick called. He was in the New York office of the Coudert Brothers law firm, and wanted to know if Mr. Powers

People in Hong Kong think they work very hard. I think Brian has demonstrated that people in New York work even harder.



Simon Keswick, Managing Director, Jardine Matheson

la. had a job that kept her in New York. Mr. Keswick persisted, and Mr. Powers finally arrived in April of last year, with a seat on the board and a mandate to direct financial strategy. Paula Powers, who was teaching at Columbia Law School, was willing to move to Hong Kong, and both parents thought it was the ideal time for their son, Jeremy, to live abroad. Mr. Powers has so far not studied Chinese. As the new tai-pan, Mr. Powers will face a number of challenges. Despite diversification, a large share of the company's assets remain in Hong Kong. The property market and business climate here are volatile, even though Beijing has promised that it will allow Hong Kong to maintain its capitalist way of life for at least 50 years after 1997. Then there is rising competition in Asia: local entrepreneurs who in the last two decades have built their own conglomerates to challenge British interests. In Hong Kong, such Chinese entrepreneurs as Sir Y.K. Pao and Li Ka-shing have often outmaneuvered Jardine in the last decade. These entrepreneurs are potential threats, for Jardine could become an acquisition target. One reason they have gained on British interests is that they know the market better — and that could be all the more true when Jardine is run by a man who is a newcomer to the region. Then there is rising competition in Asia: local entrepreneurs who in the last two decades have built their own conglomerates to challenge British interests. In Hong Kong, such Chinese entrepreneurs as Sir Y.K. Pao and Li Ka-shing have often outmaneuvered Jardine in the last decade. These entrepreneurs are potential threats, for Jardine could become an acquisition target. One reason they have gained on British interests is that they know the market better — and that could be all the more true when Jardine is run by a man who is a newcomer to the region.

Bonn Economy Is Back in Growth Pattern, Bundesbank Says

By Ferdinand Protzman International Herald Tribune FRANKFURT — After two quarters of negative or zero growth, West Germany's economy began expanding in the second quarter of 1987, and there are signs that growth is likely to continue, the Bundesbank said Monday. In its monthly report for June, the central bank attributed the 0.5 percent decline in the nation's gross national product in the first quarter to unusually severe winter weather that nearly shut down the construction industry. GNP measures the output of a nation's goods and services. Excluding the construction industry from calculations, GNP was up slightly in the first quarter from the previous three-month period, the Bundesbank said. In the fourth quarter of 1986, however, GNP registered no growth from the previous quarter.

A drop in private consumption in the first quarter from the previous quarter also inhibited GNP growth. The central bank said that a glut of new-car purchases in the final quarter of 1986, triggered by a year-end expiration of tax breaks on autos with pollution-control equipment, distorted the statistics. But the economy picked up in April, with a rebound in construction activity leading the way, the Bundesbank said. It said that investment in capital goods also was rising after stagnating in late 1986, and that exports had stabilized. Exports had been declining as a result of the appreciation of the Deutsche mark against other major currencies. While the report was cautiously positive about the prospects for continued economic growth after the slow start, many private economists are forecasting GNP growth of only 1 percent for all of 1987, well below the government's prediction of just under 2 percent. The government's forecast is based on a strong increase in domestic demand that would offset an expected decline in exports. The Bundesbank's currently expansive monetary policy is intended to help boost private consumption and thereby increase domestic demand. The Bundesbank said the central bank money supply, its primary measure of monetary growth, grew at an annual rate of 7.9 percent in May, up from an annual rate of 7.8 percent in April. That pace is well above the Bundesbank's 1987 target range of 3 to 6 percent growth. Some critics argue that the expansionary policy risks kindling inflation and may fail to spur domestic demand. Others say that excessive growth in the money supply would give a solid boost to the economy in 1987, but would result in recession by the end of 1988.

"The assumption of any GNP growth for the year is optimistic," said Gert Schmidt, an economist for Industriekreditbank AG in Düsseldorf. "It is also based on the dollar-mark exchange rate holding about where it is now, which in light of recent history seems very questionable." But the dollar's relative stability since the Louvre currency accord reached in February by leading industrialized nations has triggered the mild rise in capital goods investment, said an economist for one of the largest West German commercial banks. "That allows investment strategies to be influenced by the positive fundamental factors, such as stable prices, low interest rates and good liquidity," he said. Whether domestic demand can fully compensate for the decline in exports is questionable, however, economists said.

Monday's OTC Prices NASDAQ prices as of 4 p.m. New York time. Via The Associated Press

Table with columns: 12 Month High, Low, Stock, Div. Yld., Sales, High, Low, 4 P.M. CHG. Lists various OTC stocks and their prices.

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BANKS: 'Buffer' Currency Fund

(Continued from first finance page) means to correct what he described as an unequal playing field. Some banks, he said, have total liberty in the positions they may take in the foreign exchange market. Others, such as most West European banks, are limited by banking supervisors in the size of the exposure they can undertake. "The directives should be the same for all," he added. "We have seen overtrading, which must be avoided. Otherwise, we'll all get swamped with new restrictions. Either we all behave, or we are all losers," he said. Koji Takahashi, senior managing director of the world's largest commercial bank, Dai-ichi Kangyo Bank of Japan, called the suggestion a "workable idea." For the past month, Japanese banks have been under orders to report their foreign exchange positions daily to the authorities. However, Mr. Goybent said that "there was no intention to restrict activities in the market." Rather, he said, excessive volatility in exchange rates drove the Japanese government to "ask" financial institutions to take the long-term implications of their actions into account. Karl Otto Pohl, president of the West German central bank, or Bundesbank, also called Mr. Ekman's proposal "a good idea."

People in Hong Kong think they work very hard. I think Brian has demonstrated that people in New York work even harder.

Mr. Powers was at the Ford Foundation when James D. Wolfensohn, an Australian-born financier, called him. Mr. Wolfensohn was planning to set up a New York investment bank, and had heard about Mr. Powers from a Debevoise & Plimpton partner. So after four years at the foundation, Mr. Powers joined Mr. Wolfensohn, becoming his chief assistant at James D. Wolfensohn Inc. Soon after the firm opened, a man named Simon Keswick called. He was in the New York office of the Coudert Brothers law firm, and wanted to know if Mr. Powers

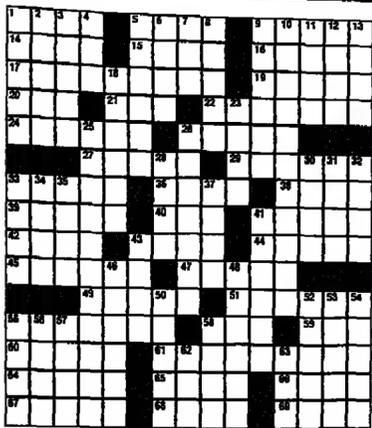
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Table with columns: 12 Month High, Low, Stock, Div. Yld., Sales, High, Low, 4 P.M. CHG. Lists various NYSE and NASDAQ stocks and their prices.



ACROSS
1 Solidify
3 Kind of box
9 Variegated chalcidony
14 Biblical prophet
15 Dramatist from Kan.
16 Punctuation mark
17 Burgess beast
18 Stratus, e.g.
20 Killarney-to-Blanney dir.
21 Verb ending
22 They got away 2.4 P.M. item for a
25 Singer Della
27 Void
29 Peddler
33 Was eminent
36 Whirling vapor
38 Author Vidal
40 — Baba
41 Heavy literature
42 Kind of door
43 Hadrian's
44 Place for a hen party
45 "Sorrow changed" to
47 Spot seen on Mars
49 Actor Lloyd

PEANUTS



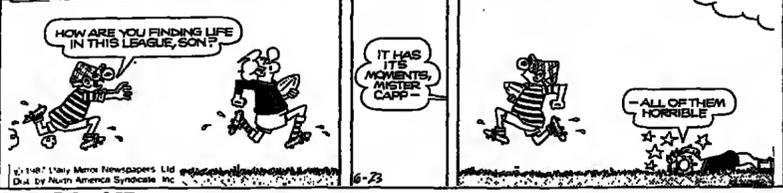
BLONDIE



BEEBLE BAILEY



ANDY CAPP



WIZARD OF ID



REX MORGAN



GARFIELD



DENNIS THE MENACE



JUMBLE

Unscramble these four Jumbles, one letter to each square, to form four ordinary words.
NOPUD
HOBUG
VERDIF
KRALTE

WEATHER

Table with columns for EUROPE, ASIA, NORTH AMERICA, MIDDLE EAST, and OCEANIA, listing high and low temperatures for various cities.

World Stock Markets

Table showing closing prices in local currencies for various stock markets including Amsterdam, London, Frankfurt, Zurich, and Tokyo.

BOOKS

BEVERLY: An Autobiography
By Beverly Sills and Lawrence Linderman. 356 pages. \$19.95. Bantam Books Inc., 666 Fifth Avenue, New York, N.Y. 10103.
Reviewed by Florence King

"BEVERLY" is a sitcom full of belly laughs and Brooklynese wisecracks that has all the immediacy of a kaffeeklatsch confessional. The funniest story concerns the time the 17-year-old Beverly Sills, née Belle Silverman of Brooklyn, went on a summer tour of the Midwest that found her in a village near Kearney, Nebraska, in the middle of a grain fungus blight called "stinking smut" that was killing cattle.

Florence King, the author of five books, including "Southern Ladies and Gentlemen" and "Confessions of a Failed Southern Lady," wrote this review for The Washington Post.

Solution to Previous Puzzle

SCAN CALED TRAM
TOTA ATALA SAGA
TROT RAGES EVER
UMPIRE SMELTERS
OVES TUIS
PENMANETS ARETES
AVTIAN APPLE ION
REEL AREAL HARA
ING AMENT SORER
STERNE TEAMMATE
EIRE SPUJE
STARP CURED UPAB
ELSE ARENA NEWT
PEER NEWEL SEAS

CHESS

By Robert Byrne
IT IS strange that in the current epoch, when so many diverse strategic and tactical ideas are pursued by a veritable army of hungry tournament players, one can still find a stone of critical importance unturned. Yet it does happen.

REBOARD

Table showing chess board positions and game results for various tournaments and players.

SPORTS

Simpson Wins U.S. Open by One Stroke

By Thomas Boswell

Washington Post Staff Writer

SAN FRANCISCO — Scott Simpson found a place in history Sunday.

The slim 31-year-old who, until Sunday afternoon had won just two events in nine years on the PGA tour, will join Jack Fleck, Andy North, Orville Moody and Sam Parks as an unexpected winner of the U.S. Open.

Tom Watson joined Ben Hogan and Arnold Palmer as a heartbreak victim of The Olympic Club, losing by one slim shot the tournament that he had led for almost all of the last three days.

When his 50-foot putt on the final hole hung on the lip — one inch from glory — Watson knew the defection of his two precursors in U.S. Opens played on this diabolical course.

This 87th Open was a trophy that Simpson earned with consistent birdies on the 14th, 15th and 16th holes for a final round 68 and a four-day total of 3-under-par 277.

Watson, without a victory in three years in a career that includes five British Open titles, two Masters and the 1982 U.S. Open, seemed headed for disaster early.

He bogeyed the first, second and fifth holes to fall out of his one-shot lead starting the day and back into a tangled web of big-name contenders, including Seve Ballesteros (who eventually finished third at 282) and Bernhard Langer, Ben Crenshaw, Larry Mize, Curtis Strange and Bobby Wadkins, all of whom tied for fourth at a distant 283.

While others staggered, Watson rallied with birdies at the eighth and ninth holes to reach 1 under

par and take the lead back alone.

Watson had been a stampee just before the turn was a two-man race by the time Watson got to 14.

Simpson, playing in the group in front of Watson, birdied from four feet at No. 14 to tie as Watson listened to the cheers from on ahead.

By the time Watson reached the green, facing a downhill, 23-foot putt, Simpson had also knocked his ball to 20 feet at the 15th.

As Watson lined up his putt, Simpson ran his home to take the lead.

Watson answered, tricking his birdie putt into the hole to regain a share of first.

Now it was match play, Simpson steaming brightly ahead, his concentration locked in place.

As Watson watched from 100 yards behind him in the 16th fairway, Simpson ran a 12-foot birdie putt in the heart of the hole for what proved to be the winning shot.

Simpson, one of the most pluggish players in golf, as well as one of the nicest, missed one hand a few inches to the crowd, then looked back down the fairway toward Watson and gave a barely perceptible nod, as though saying, "Matched me once. Now match me twice."

Watson couldn't. Like many others, he misjudged the rock-hard 16th green. His wedge shot ran 18 feet past and his putt, like many others all day, dove below the hole.

Still, the horrific 17th, awaited Simpson. Like so many others last week, Simpson hit an excellent drive, only to see it kick right off



Scott Simpson raises his arms in salute after the 18th hole.

the slick fairway into nasty side-hill rough. Surely this would be the end of a player known more for fading finishes than charges.

Simpson's mid-iron shot found the left front bunker and his explosion curved a good eight feet past the hole. After dozens of practice putts while partner Lennie Clements finished the hole, Simpson finally ran what seemed like his 10th tough par-saver of the day into the center of the cup.

That was the last piece of heroism on a glorious Simpson day. After a birdie at No. 1, which put him in the lead for a short while, he

bogeyed Nos. 3 and 5 to fall back into the mob. He seemed like another easily forgotten pretender until he steadied himself with a short birdie putt at the easy 288-yard downward seventh hole. There came six straight pars, almost all of them made by character-building three-to-five-foot putts.

After his birdie streak, then his save at 17, Simpson managed an almost anti-climactic par at the final hole. Two irons and two putts make four. Up to you Mr. Watson.

When Watson's final effort missed, another Open had been added to The Olympic Club's horror story lore.

In Paris, Au-Dela Du Rugby

By Samuel Abt

International Herald Tribune

PARIS — The quarterback

backpedaled, turned and tried to hand off the ball to a running

back who was not even in the

game. The play was a disaster

and the referee called a foul

because the referee was not

in the right position.

As proof, the Paris Castors, or Beavers, rounded the Paris Jets, 75-0, on Sunday in Casque d'Or VI.

On what was billed as Le Super Bowl Français, Mais non, it wasn't excitement Super Bowl XXI in Pasadena, California, but it was by far the biggest event in the short life of football américain in France.

Some of the razzle-dazzle along the sidelines was familiar to those who saw the National Football League title game in January. There were majorettes, too, and a musical salute, and a cheerleading squad known as Les Femmes Parisiennes. However, the crowd at Jean Bouin Stadium in Paris was somewhat smaller, 2,500 or 3,000 instead of the 101,000 who filled the Rose Bowl and the 120 million or so who watched on international television as the New York Giants beat the Denver Broncos, 39-20.

Tickets cost 50 francs (about \$8) instead of the face price of \$75 in California.

Nor did the winners' prize money total in the hundreds of thousands of dollars. The Castors, the favorites after they beat the Pine Angels of Joinville-le-Pont in the semifinals, won 20,000 francs' worth of football equipment. The Jets, who beat the Argonautes of Aix-en-Provence to reach the title game, went home empty-handed as well as humiliated.

They could console themselves, though, in thinking that the game had been another step forward in the growth of the sport across Europe. Since early this decade, leagues have been formed and are growing in England, Italy, Finland, the Netherlands, Belgium, West Germany and France. In England, where the London Ravens were the sole football team in 1983, there are now more than



Harry Carson, center, with Brian Sipe behind him are cheered by the French players.

200 registered teams, 146 of them in the senior, or adult, category.

A crowd of 80,000 filled Wembley Stadium in London last August to watch the Chicago Bears beat the Dallas Cowboys in an NFL exhibition game. The Denver Broncos are scheduled to play the Los Angeles Rams in another preseason game at Wembley on Aug. 9 and most of the seats have already been sold.

With a bit of luck and publicity, the organizers of the 29-team French championship league hope for the same surge of interest to lift their sport out of the status of simply a curiosity.

The French organizers had some publicity, as the U.S. Embassy in Paris and the National Football League Players Association combined to provide a week-long visit by Harry Carson, the New York Giants all-pro inside linebacker, and Brian Sipe, the former quarterback for the Cleveland Browns and New Jersey Generals.

Both men have been interviewed extensively by French magazines and television, which this year began showing NFL games in edited, week-of films. It also showed the Super Bowl live for the first time.

Carson and Sipe have also attended news conferences, coaching clinics and autographing sessions and the Giants' linebacker even got to kick off a ceremonial ball for the Casque d'Or, or Golden Helmet, title game.

The play they watched was erratic by American standards although Carson drew a cheer from the crowd for praising the win-

ning team. The cheer turned to friendly laughter when he then suggested that the Castors could play an NFL team a good fight.

"The level of play is somewhere between good U.S. high school and bad junior college," said Steven St. John, a 24-year-old safety for the Jets. A native Californian, he played defensive back and wide receiver for Santa Clara University before coming to Paris to be trained as a model for fashion photography and television commercials.

"There are no tricky moves in the French game," St. John continued. "It's standard plays, patterns and reverses. It's pretty easy for an American to fit in, especially somebody like me who's played the game since I was 7 years old."

French teams are limited to five foreign players, with no more than two allowed on the field, le terrain, at the same time. To help further the development of French players, foreigners are banned as quarterbacks, as they are in many other European leagues. This rule inspires long debate over a fine point: If a foreigner is a running back, can he legally throw an option pass?

"We're still feeling our way with many of the rules, trying to get people to understand and agree on them," admitted Stéphane Wepre, 27, the president and starting center of the Jets. Another problem is football's second-cousinhood to rugby, a popular game in France, in which the team with the ball can move it downfield with a kick that either team can field.

"There is no advancing the ball

by kicking it ahead," sternly warned a guide to football américain distributed to spectators.

Like most of the others on the field in the Casque d'Or, Wepre had no football experience until a few years ago. St. John found a team while jogging through the Bois de Boulogne and noticing the Jets at practice, but Wepre was recruited by an English friend at STC Corp., where he works as an engineer in fiber optics.

At 187 pounds and 5 feet 11 inches (85 kilograms and 1.8 meters), Wepre is standard size for a French lineman, although some defensive linemen go up to 6 foot, 3 inches and 220 pounds. But he finds pass blocking easier than serving as president of his team.

"On the field, we have no problems," he said proudly. "We were formed in 1984, played our first games in 1985 and won the Casque d'Or that same year. We slipped a little last year, losing in the quarterfinals, but here we are again." He spoke before the blowout on the field.

Wepre credits an active recruiting policy for his team's success to the big game. "We look for players everywhere, in the streets, the office, even in the subways. First we look at his size, then we try to see if he can run."

"Off the field, it takes a lot of work to keep the team going. All we play for are fun and pleasure. Nobody gets paid."

Still he predicts a shiny future for the game, especially if it catches on with school children, to whom football remains the European name for soccer.

SCOREBOARD

Baseball

Sunday's Major League Line Scores

Table with columns for team names and scores. Includes American League and National League games.

Basketball

NBA Draft Selections

Table listing NBA draft selections for the 1987 draft, including player names and their respective teams.

Transition

Table listing player transitions between teams, including player names and their previous/current teams.

Robinson First Pick in NBA Draft

The Associated Press

NEW YORK — The San Antonio Spurs, who sank to the bottom of the Midwest Division standings the past two seasons after years of having solid teams, took Navy's David Robinson with the first pick in the NBA draft Monday.

The Spurs selected Robinson, No. 1 although a two-year Navy commitment will keep him from playing in the NBA for two seasons.

If San Antonio doesn't sign Robinson before the 1988 draft, a judge or an arbitrator will determine whether it will keep the rights to him for another year.

Robinson holds 33 school records at Navy, and was among college leaders in points, rebounds and blocked shots last season. As a senior, he was third in the nation in scoring with a 23.2 average, fourth in rebounding with 11.8 per game and first in blocked shots with 4.5 per game.

The Phoenix Suns took forward Armon Gilliam of Nevada-Las Vegas with the No. 2 pick. Gilliam, nicknamed "The Hammer," averaged 23.2 points and 9.3 rebounds for University of Nevada-Las Vegas last season.

The New Jersey Nets took guard Dennis Hopson of Ohio State, filling a gaping hole at the shooting guard position. Hopson was Big Ten player of the year in 1986-87 after finishing second nationally in scoring with a 29.0 average.

Hopson also set a single-season conference scoring record with 958 points, helping the Buckeyes reach the NCAA tournament. Hopson had 17 games with 30 or more points as a senior while dividing time between forward and guard.

The Los Angeles Clippers, with the first of their three first-round selections, took Georgetown's Reggie Williams, a forward in college who is projected as a guard in the NBA. Williams, who earned MVP honors in the NCAA championship victory over Houston as a freshman, developed well as a scorer and all-around player in his junior and senior seasons, averaging 17.6 and 23.6 points, respectively.

Seattle, using the first-round pick it acquired in a trade with the New York Knicks for Gerald Henderson, produced the first big surprise of the draft when they took Scottie Pippen of Central Arkansas.

The forward, despite his small-college background, impressed NBA scouts with his play in the NBA Classic, a post-season all-star game.

He averaged 23.6 points and 10 rebounds as a senior but was ignored by major-college recruiters after graduating from high school as a guard.

Seaver Retires From Baseball

United Press International

NEW YORK — Tom Seaver, attempting a comeback with the New York Mets at the age of 42, retired from baseball Monday just 16 days after rejoining his old club.

Seaver, a certain Hall of Famer who led the Mets to a World Series title in 1969, said he was unhappy with his progress after being sidelined for nine months.

"I can't complain about anything," he said at Shea Stadium news conference. "I have had more than my share of accomplishments, championships and good times. You have to know when it is time to go. Now this is the time for me to go."

A knee injury prevented him from pitching in last year's playoffs and World Series with Boston. He became a free agent after the season and June 6 rejoined the Mets.

Seaver, with a 311-200 record and 2.86 ERA in a 20-year career, arrived at his decision after a simulated game Saturday at Shea Stadium.

"I want home that night and discussed everything with the family," he said. "I know myself better than anyone and I came to the conclusion that the 4,000-plus innings, the knee injury and the long layoff had finally taken its toll."

Seaver entered the majors in 1967 and pitched more than 10 seasons for the Mets. The right-hander won the National League Cy Young Award three times — in 1969, 1973 and 1975. He won 20 games five times, including a 25-7 mark when the Mets in 1969. He led the NL in ERA and strikeouts in 1970, 1971 and 1973.

Wimbledon Rained Out On First Day of Matches

The Associated Press

WIMBLEDON, England — The opening day of the 101st Wimbledon tennis championships was wiped out by rain Monday, without a ball being struck on any of the 18 grass courts.

After a gloomy, wet, overcast day at the All England Club, organizers announced late in the afternoon that there would be no play. It was only the fourth time in the history of the Grand Slam tournament that the whole of the first-day program has been rained out.

The decision was a bitter disappointment for the thousands of spectators who had braved the weather with raincoats and umbrellas for a place in the stands.

Hana Mandlikova, meanwhile, withdrew from the tournament with an injured right foot. Mandlikova, who lost the 1986 Wimbledon final to Martina Navratilova, was seeded No. 4. Her place will be filled by Helena Sukova, who was seeded fifth. Ninth-seeded Claudia Kohde-Kilsch takes Sukova's place, and Sylvia Hanika becomes the No. 9 seed. Playing in Hanika's place will be Anna-Maria Fernandez.



Ayrtton Senna waved the Brazilian flag after retaining his Detroit Grand Prix title Sunday, with a victory over competitor Nelson Piquet. Senna raced his Lotus Honda over the 2.5-mile course in 1 hour, 50 minutes, 16.4 seconds.

U.S. Open Golf

First Round

Table showing scores for the first round of the U.S. Open Golf tournament, listing player names and their scores.

European Soccer

Spanish First Division

Table showing league standings for the Spanish First Division, listing team names and their positions.

European Soccer

New W.L.T. GP GA Pts

Table showing league standings for the New W.L.T. GP GA Pts, listing team names and their statistics.

Major League Standings

American League

Table showing standings for the American League, listing team names and their records.

National League

Best Division

Table showing standings for the National League Best Division, listing team names and their records.

National League

West Division

Table showing standings for the National League West Division, listing team names and their records.

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